IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

QUANTUM TECHNOLOGY INNOVATIONS, LLC, Plaintiff, v. POPCORNFLIX.COM LLC, CRACKLE PLUS, LLC, SCREEN MEDIA VENTURES, LLC, and CHICKEN SOUP FOR THE SOUL ENTERTAINMENT INC., Defendants.	:	Case No. _____ **JURY TRIAL DEMANDED**

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff, Quantum Technology Innovations, LLC (hereinafter, "QTI" or "Plaintiff"), by and through its undersigned counsel, hereby respectfully files this Complaint for Patent Infringement against Defendants, Popcornflix.com LLC, Crackle Plus, LLC, Screen Media Ventures, LLC, and Chicken Soup for the Soul Entertainment Inc. (hereinafter, "Crackle" or "Defendants"), as follows:

PARTIES

1. Plaintiff Quantum Technology Innovations, LLC is a private limited liability company incorporated under the laws of the State of Wyoming.

2. Upon information and belief, Defendant Popcornflix.com LLC is a limited liability company organized and existing under the laws of the State of Delaware, with a place of business at 25 Madison Avenue, New York, New York 10010, and can be served via its registered agent, Corporation Service Company, 251 Little Falls Drive, Wilmington, Delaware 19808, or wherever Defendant Popcornflix.com LLC, or its registered agent and its authorized employees, officers, directors, and/or managers, may be found.

3. Upon information and belief, Defendant Crackle Plus, LLC is a limited liability company organized and existing under the laws of the State of Delaware, with a principal place of business at 25 Madison Avenue, New York, New York 10010, and can be served via its registered agent, Cogency Global Inc., 850 New Burton Road, Suite 201, Dover, Delaware 19904, or wherever Defendant Crackle Plus, LLC, or its registered agent and its authorized employees, officers, directors, and/or managers, may be found.

4. Upon information and belief, Defendant Screen Media Ventures, LLC is a limited liability company organized and existing under the laws of the State of Delaware, with a principal place of business at 800 Third Avenue, New York, New York 10022, and can be served via its registered agent, Cogency Global Inc., 850 New Burton Road, Suite 201, Dover, Delaware 19904, or wherever Defendant Screen Media Ventures, LLC, or its registered agent and its authorized employees, officers, directors, and/or managers, may be found.

5. Upon information and belief, Defendant Chicken Soup for the Soul Entertainment Inc. is a corporation organized and existing under the laws of the State of Delaware, with a principal place of business at 132 East Putnam Avenue, Floor 2W, Cos Cob, Connecticut 06807-2744, and can be served via its registered agent, Cogency Global Inc., 850 New Burton Road, Suite 201, Dover, Delaware 19904, or wherever Defendant Screen Media Ventures, LLC, or its registered agent and its authorized employees, officers, directors, and/or managers, may be found.

NATURE OF THE ACTION

6. This is a civil action for patent infringement to stop Crackle's infringement of United States Patent No. 7,650,376 (the "'376 Patent" or the "Patent-in-Suit"; attached hereto as Exhibit 1).

7. QTI alleges that Crackle has directly infringed and/or continues to infringe the Patent-in-Suit by, *inter alia*, making, using, offering for sale, selling, importing, using (including in

connection with internal uses and/or demonstrations), including in connection with providing the infringing products and instructions/specifications for their use, including as detailed herein.

8. Crackle has had actual and/or constructive notice of the infringements alleged herein, including as detailed herein.

9. QTI seeks damages and other relief for Crackle's infringement of the Patent-in-Suit, including as detailed herein.

JURISDICTION AND VENUE

10. This action arises under the Patent Laws of the United States, 35 U.S.C. § 1, *et seq.*, including 35 U.S.C. §§ 271, 281, 283, 284, and 285. This Court has subject matter jurisdiction over this case for patent infringement, including under 28 U.S.C. §§ 1331 and 1338(a).

11. This Court has personal jurisdiction over Crackle, including because Crackle is a Delaware corporation with a foreign registration in the State of Delaware; Crackle has places of business in the State of Delaware, including the address noted hereinabove; Crackle has minimum contacts within the State of Delaware; Crackle has purposefully availed itself of the privileges of conducting business in the State of Delaware; Crackle regularly conducts business within the State of Delaware; and Plaintiff's cause of action arises directly from Crackle's business contacts and other activities in the State of Delaware, including at least by virtue of Crackle's infringing methods, systems, apparatuses, products, and/or services, which have been, and are currently, at least practiced, made, and/or used in the State of Delaware. More specifically, Crackle directly and/or through intermediaries, at least makes, distributes, imports, offers for sale, sells, advertises, and/or uses, the accused products and/or services identified herein, comprising the claimed systems and/or that practice the claimed methods of the Patent-in-Suit in the State of Delaware. Crackle is subject to this Court's specific and general personal jurisdiction, including pursuant to Constitutional Due Process and the Delaware Long Arm Statute. Crackle is subject to this Court's

general personal jurisdiction due at least to Crackle's continuous and systematic business contacts in Delaware, including related to operations conducted in Delaware and the infringements alleged herein. Further, on information and belief, Crackle is subject to this Court's specific personal jurisdiction, including because Crackle has committed patent infringement in the State of Delaware, including as detailed herein. Further, on information and belief, Crackle regularly conducts and/or solicits business, engages in other persistent courses of conduct, and/or derives substantial revenue from goods and/or services provided to persons and/or entities in Delaware, including because Crackle solicits customers in the State of Delaware, Crackle has paying customers who are residents of the State of Delaware and who purchase and/or use Crackle's infringing products and/or services in the State of Delaware and throughout the U.S., and Crackle has an interactive website and/or applications that are accessible from the State of Delaware and throughout the U.S.

12. Venue is proper in this District, including pursuant to 28 U.S.C. §§ 1391 and 1400(b), including because Crackle resides in the State of Delaware at least by virtue of the fact that it is incorporated in the State of Delaware and at least some of the direct infringement of the Patent-in-Suit occurs in this District.

THE PATENT-IN-SUIT

13. Plaintiff refers to and incorporates the allegations in the above paragraphs as if set forth fully herein.

14. QTI is the owner of all right, title, and interest in the Patent-in-Suit, including the right to sue for past, present, and future infringement thereof and to collect damages for any such past, present, or future infringement. The inventions disclosed and claimed in the '376 Patent comprising, *inter alia*, distribution of media content via a decentralized computer network, provide numerous benefits over any prior methods, systems, apparatuses, and/or computer-readable media.

A. Overview Of The '376 Patent

15. Plaintiff refers to and incorporates the allegations in the above paragraphs as if set forth fully herein.

16. The '376 Patent is entitled "Content Distribution System for Distributing Content Over a Network, with Particular Applicability to Distributing High-Bandwidth Content." U.S. Patent Application No. 09/774,700, filed on November 20, 2000, and which issued on January 19, 2010 as U.S. Patent No. 7,650,376, claims priority to U.S. Provisional Patent Application No. 60/192,165 filed on March 27, 2000.

1. Overview of the Prosecution of the '376 Patent

17. Plaintiff refers to and incorporates the allegations in the above paragraphs as if set forth fully herein.

18. During prosecution of the '376 Patent, on December 2, 2005, the patent examiner issued a Non-Final Rejection, rejecting then-pending claims 1-20, 22-25, 27-33, and 35-123 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 5,956,716 to Kenner et al. ("*Kenner*") and rejecting then-pending claims 21, 26, and 34 under 35 U.S.C. § 103(a) as being obvious in view of *Kenner*.

19. On March 2, 2006, the applicant amended the claims and argued that the cited *Kenner* reference did not render the claims, as amended, unpatentable.

20. With regard to the rejections under 35 U.S.C. §§ 102(e) and 103(a), the applicant noted in its response to the patent examiner's rejection that conventional *Kenner* did not teach, suggest, nor render obvious "'…communicating to a client the identity of a node server having…specified content stored thereon, thereby enabling the client to request transmission of the specified content from the node server,' as recited in Claim 1." The applicant further noted that conventional *Kenner* did not teach, suggest, nor render obvious that "an owner of the node server [is] offered an

incentive as compensation for transmission of the specified content to the client, as recited in Claim 1."

21. On June 1, 2006, the examiner issued a Final Rejection maintaining the rejection of then-pending claims 1-20, 22-25, 27-33, and 35-123 under 35 U.S.C. § 102(e) as being anticipated by *Kenner* and then-pending claims 21, 26, and 34 under 35 U.S.C. § 103(a) as being obvious in view of *Kenner*.

22. On December 1, 2006, the applicant filed a request for continued examination ("RCE"). As part of the RCE filing, the applicant, without amending the claims, reiterated the previous arguments that the cited *Kenner* reference did not render the claims, as previously amended, unpatentable. At the same time, the applicant added additional claims 124-127.

23. In regard to the rejections under 35 U.S.C. §§ 102(e) and 103(a), the applicant noted in its response to the patent examiner's rejection that conventional *Kenner* neither teaches, suggests, nor renders obvious "'ascertaining that [a] node server transmitted…specific content to [a] client,' as recited in Claim 1." Further, the applicant specifically noted that the examiner failed to address the specific highlighted differences the applicant noted between the claimed invention and *Kenner*.

24. On February 23, 2007, the examiner issued a Non-Final Rejection maintaining the rejection of then-pending claims 1-20, 22-25, 27-33, and 35-127 under 35 U.S.C. § 102(e) as being anticipated by *Kenner* and then-pending claims 21, 26, and 34 under 35 U.S.C. § 103(a) as being obvious in view of *Kenner*.

25. On August 23, 2007, the applicant filed a response and, without amending the claims, reiterated the previous arguments that the cited *Kenner* reference did not render the claims, as previously amended, unpatentable. The applicant, again, specifically noted that the examiner failed to address the specific highlighted differences the applicant noted between the claimed invention and *Kenner*.

26. On April 25, 2008, the examiner issued a Non-Final Rejection, now rejecting all of then-pending claims 1-127 under 35 U.S.C. § 103(a) as being obvious in view of *Kenner* and U.S. Patent No. 5,956,716 ("*Guenthner*").

27. On August 25, 2008, the applicant filed a response and, without amending the claims, argued that the cited combination of *Kenner* and *Guenthner* did not render the claims unpatentable, nor would it be obvious to combine these references.

28. With regard to the rejection under 35 U.S.C. § 103(a), in addition to reiterating the applicant's prior arguments relating to conventional *Kenner*, the applicant noted that neither conventional *Kenner*, nor conventional *Guenthner*, alone, or in combination teach, suggest, nor render obvious "'communicating to [a] client the identity of a node server having…specified content stored thereon,' as recited in Claim 1. The applicant further noted that "any teaching, whether by *Guenthner* et al. or anyone else, regarding [this limitation], would be of no use and incompatible with the invention taught by *Kenner* et al., and thus it would not be obvious to combine such teaching with the teaching of *Kenner* at al. to produce an invention as recited in Claim 1."

29. On February 4, 2009, the examiner issued a Final Rejection, rejecting then-pending claims 35-38, 40-55, 57-76, 95-111, 113-120, 122-123, and 125-127 under 35 U.S.C. § 103(a) as being obvious in view of *Kenner* and *Guenthner*, and rejected claims 39, 56, and 112 as being dependent upon rejected base claims. The examiner allowed then-pending claims 1-34, 77-94, 121, and 124.

30. On March 2, 2009, the applicant filed a response, canceling then-pending claims 35-38, 40-55, 57-76, 95-98, 100-111, 113-120, 122-123, and 125-127, amending claims 39, 56, 99, and 112, and adding additional claims 128-192, and argued that the then-pending claims, as amended and added, were not unpatentable in view of *Kenner* and *Guenthner*.

31. On March 17, 2009, the examiner issued a Non-Final rejection, rejecting then-pending claims 128-160 under 35 U.S.C. § 112, ¶ 1, as containing subject matter not properly described in the specification and rejecting then-pending claims 1-34, 39, 56, 124, and 128-160 under 35 U.S.C. § 112, ¶ 2, as being indefinite. In this Non-Final rejection, the examiner also rejected then-pending claims 1-34, 39, 56, 121, 124, and 128-192 under 35 U.S.C. § 101 as being directed to non-statutory subject matter.

32. On June 17, 2009, the applicant amended the claims and argued that the claims, as amended, overcome the rejections under 35 U.S.C. §§ 101 and 112, ¶¶ 1 & 2.

33. In regard to the rejections under 35 U.S.C. § 101, the applicant noted in its response to the patent examiner's rejection that the rejected claims were amended "to make clearer that [those claims] recite apparatus (that includes a core server and can further include a node server and/or client) and therefor recite statutory subject matter.

34. In regard to the rejections under 35 U.S.C. § 112, ¶ 1, the applicant noted in its response to the patent examiner's rejection that "the description throughout [the] specification of the functions performed by the receiver and transmitter recited in [the] claims…inherently disclose [those features] and, consequently, the receiver and transmitter recited in [those claims] meet the requirements of the first paragraph of 35 U.S.C. § 112. In regard to the rejections under 35 U.S.C. § 112, ¶ 2, the applicant noted in its response to the patent examiner's rejection that the claims were amended "to make clearer that [the claims] recite apparatus: those claims now include recitations that the apparatus include a core server and can further include a node server and/or client."

35. On August 24, 2009, the patent examiner issued a notice of allowance.

2. Overview of the Unconventional '376 Patented Inventions and the Conventional Technology at the Time

36. Plaintiff refers to and incorporates the allegations in the above paragraphs as if set forth

fully herein.

37. At the time of the '376 inventions reflected in the issued claims (the "patented inventions"), the main method of video content distribution was through the television. Distribution of video content online was very limited and suffered from many issues, including limitations due to bandwidth and feature set. '376/1:57-66. In either of the television or online distribution systems, the content was provided via a broadcast model wherein the content provider would transmit the content to any user or client that was connected to the content provider. In the conventional television broadcast model, any content was only required to be sent a single time, and all clients (*e.g.*, receivers) would receive the content at the same time. However, where the clients interacted in a staggered fashion (*i.e.*, connected at differing times to request the same content), the asynchronous nature of such content delivery reduces the content provider's ability to consistently operate within its resource limits. The best method of providing an asynchronous or on-demand viewing experience at the time was through video tapes (*e.g.*, VHS), CDs, and/or DVDs.

38. Notably, distribution of content online differed from television distribution in this way, including that the number of users or clients connecting to the content provider could vary much more quickly, including that the times the users or clients may connect were not limited to the specific times that content was set to be provisioned as in the television systems. An example of conventional architecture, where a user or client connected to the content provider, is exemplified in the figures of U.S. Patent No. 6,505,240 to Blumenau ("*Blumenau*") cited in the specification of the '376 Patent:

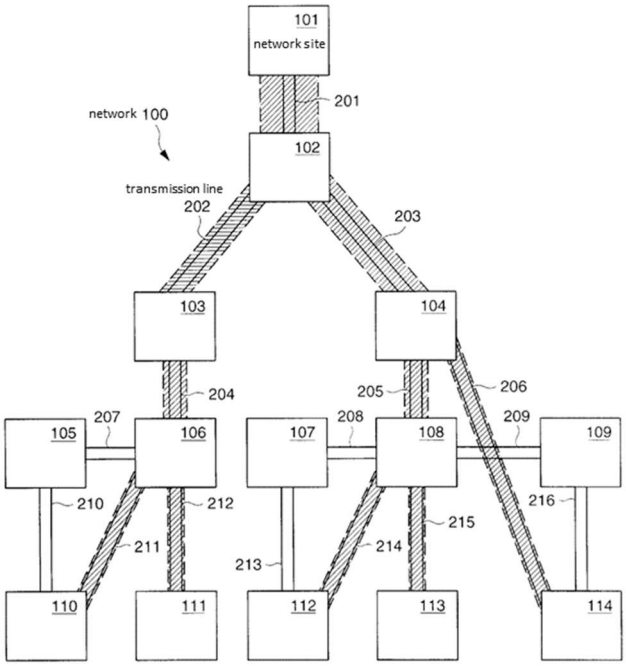


FIG. 2

Blumenau at Fig. 2; *see also Blumenau* at Figs. 1 & 3; 4:31-6:57.

39. Provision of content over a network, including provision of video content to multiple clients, if done at all, was typically a slow, arduous, and unpredictable process which could be cumbersome and time consuming, if at all possible, including because each client that connected to the content provider resulted in additional bandwidth usage as the full content of the web site, including any high-bandwidth content (*e.g.*, video content, 3D images, etc.), was transferred at the time the client first connected. '376/3:65-4:2 & 4:13-20. Neither the content provider nor the client could choose the time the content was transferred other than by choosing when the client connected to the content provider. Further, neither the content provider, nor the client, could choose specific content to be transferred, but, rather, all of the content on the web site was transferred upon the client connecting to the content provider. Including because of the foregoing, it was particularly difficult for content providers to manage the provision of content to large numbers of clients or the provision of multiple pieces of video content. Moreover, it was especially difficult, if not

impossible, for content providers to manage the provision of multiple pieces of video content to large numbers of clients. In some situations, such as accessing websites between countries, these limitations simply made provisioning high-bandwidth content impossible.

40. In such cases, the content provider would be limited by the resources available to it, including, *inter alia*, the bandwidth of the network between the content provider and client and the hardware and software of the content provider's server that is managing the provisioning of content. '376/1:57-66; 3:65-4:2; & 4:13-20. Further, as the data size of the content increased, these limitations would become limiting, resulting in exponential degradations in, *inter alia*, transfer speeds and increasing the likelihood of the content provider's hardware and/or software crashing or otherwise ceasing to transfer data to any number of clients. '376/1:57-66; 3:65-4:2; & 4:13-20. Thus, content providers were required to limit the number of videos, and/or the data size of each video, in order to operate within these limitations and attempt to ensure reliability of the transfers to clients and scalability of systems. '376/1:57-66.

41. Generally, conventional video content distribution systems were developed as similar broadcast models based on the television distribution systems, including seeking to distribute advertisements as interstitial breaks in online video content. However, while systems existed which permitted the provision of content over a network, those systems were limited by the bandwidth available to the networks used. '376/1:28-29. Specifically, where the content being transmitted was high-bandwidth content (*i.e.*, content requiring large data transmission rates relative to the network bandwidth capabilities), these systems struggled to provide consistent user-experiences, if at all. '376/1:28-2:4. One such type of high-bandwidth content was, and continues to be, video content. '376/1:30-39. Video content is typically data intensive, and higher quality videos comprise more data and, thus, require more bandwidth. '376/1:57-59.

42. At the time of the '376 patented inventions, provision of video content was very limited,

and existing systems were unable to deliver full video streams to large audiences. '376/1:59-63. Rather, in conventional systems, any video content delivered was limited to very low resolutions, very short length clips, and very low frame rates in order to reduce the data requirements of the video so that the bandwidth limitations could be met. '376/1:63-2:2. Further, even where conventional systems were able to provide these reduced data size videos, the delivery of these videos was not customizable to, or selectable by, the user. '376/2:2-4. Instead, the videos were made a static part of the web site to be transmitted to every user or client that accessed the web site, and neither the time of delivery nor content delivered could be altered. '376/2:2-4.

43. At the time of the '376 patented inventions, the most common, conventional, and practical way to provision content to multiple clients was simply to reduce the amount of content to provision by limiting what is shown on a single page, including by creating hierarchies of links to section off content into multiple areas, requiring users to cumbersomely navigate the content provider's web site, often resulting in having to wait for web pages to reload again and again as they browsed through the link hierarchy. Further, at the time of the '376 patented inventions, the most common, conventional, and practical way for clients to choose when any content was transferred was to either specifically time when they connected to the content provider or to determine a way to copy the content to the client device for viewing later – the latter often involving its own issues such as copyright infringement or broken content due to the way the web site was programmed and was often limited by the resources of the client devices, which typically included much less storage space than the servers of content providers. At best, conventional systems would only distribute portions of the video while the connection was reliable, which were almost always unviewable without the remaining portion of the video. The claimed inventions of the '376 Patent improve the functionality, efficiency, and reliability of network content distribution systems as described herein, including by eliminating the need for the content provider to heavily

invest in infrastructure, hardware, software, and/or other resources, including by providing for the use of a distributed system of third-party-owned node servers, including as described in the '376 Patent.

44. The "SUMMARY" section of the '376 Patent states, in part, as follows:

> In accordance with the invention, the distribution of content (in particular, data intensive content such as video content) by a content provider over a network (*e.g.*, a computer network such as the Internet, a television network) is facilitated by making use of network site(s) throughout the network to dispense some part or all of the content on behalf of the content provider to network site(s) that desire to receive the content. In particular, the invention can be used to facilitate the distribution of content over a network by recruiting network site(s) to act as volunteer server(s) for dispensing content on behalf of the content provider. The invention can be used, for example, to facilitate the distribution of a single set of high-bandwidth content, *e.g.*, facilitate distribution of video content over the Internet. The invention can also be used, for example, to facilitate the distribution of multiple sets of content at the same time, *e.g.*, facilitate distribution of customized content to different content users.

'376/2:8-24.

45. The '376 claimed inventions have advantages over conventional systems and methods, including that they allow multiple pieces of content to be distributed to numerous client devices asynchronously and/or on-demand, including via the use of a distributed system of devices containing the specified content. '376/3:23-4:33. In some embodiments, this includes the use of distributed node servers owned by third parties separate from the owner of the core server (*i.e.*, the content provider) such that the node servers are more closely located to client devices. '376/3:23-4:33. To the contrary, conventional systems were operated under the assumption that a pure server-client system was feasible. However, as noted herein, these systems failed to scale with larger numbers of clients, especially when delivering high-bandwidth content. An updated infrastructure and architecture was needed, and the '376 patented invention provides such systems and methods which solve these problems.

46. Including as of the priority date of the Patent-in-Suit, there have been various, albeit

vastly inferior, means outside of the claimed invention for achieving the ends of provisioning of high-bandwidth content over a network, including on the Internet. Including as noted herein, at the time of the '376 patented inventions, conventional approaches to delivering content in a scalable and reliable way to multiple clients were limited. Conventional approaches sought to solve the ongoing problem of limited resources, including bandwidth and hardware and/or software, which limited a content provider's ability to provide high-bandwidth content, including video content at longer lengths, higher frame rates, and/or higher resolutions, and provide content asynchronously and/or on-demand to large numbers of client devices. '376/1:28-2:4. These approaches included local clustering of servers in a single location; deploying clusters in a few locations and synching or mirroring the clusters; and/or using multiple internet service providers ("ISPs") to connect to the Internet (referred to as "multihoming"). '376/1:40-56. While each of these approaches address some parts of the noted limitations, they also introduce additional limitations, including additional requirements in order to provide necessary excess capacity.

47. The use of clustering required the content provider pre-determine the amount of traffic it would expect and provide a sufficient number of servers to handle that load (which can be an order of magnitude above average loads). Further, the average bandwidth required to handle a traffic load is typically not an amount close to the maximum bandwidth that would be required at any given time. This, in turn, required heavy investment by the content provider as the amount or scale of the servers increases, meaning the content provider was required to pay for additional hardware and/or software as well as the maintenance costs therefor. Notably, at the time, the convention was not to have idle bandwidth available because the enormous expense of bandwidth meant such idle bandwidth was money wasted.

48. Where clusters were used with mirroring, not only are these same issues present, but additional issues of maintaining a reliable mirror so that each cluster is identical become

exponentially apparent. In other words, to provide a consistent web experience to users, the content provider was required to constantly monitor the remote clusters to ensure any changes made at the main server were properly and reliably propagated. Additionally, even with the use of remote, mirrored clusters, each of these clusters would still be required to be able to handle the full expected traffic load.

49. For the multihoming approach, while this would potentially increase bandwidth available by providing more physical links between the content provider and client devices, there was no guarantee which of the links was used nor that, if any of the links, or connections thereon, became overwhelmed, clients would be redirected to a different, less congested link, if at all. Regardless of the amount of links, any given connection between the content provider and a client device would still be subject to limitations of that specific connection. As a result, although the content provider may have multiple links, each link, and each connection thereon, would still need to be able to carry the entire expected traffic load.

50. Thus, in each of these approaches, the content provider would be subjected to a considerable cost, which was often over double the average initial infrastructure expense and ongoing operation costs. These approaches also required the content provider to make wild predictions about its initial and future traffic in order to properly scale. As a result, only the larger content providers were able to even attempt to implement these approaches, meaning the vast majority of content providers simply did not do so.

51. A distributed, scalable third-party-owned node server-based systems, including the inventions described in the ‘376 Patent, avoids and/or addresses these issues by providing a means for the content provider to distribute and scale its system. The content provider’s system is distributed by using already-existing servers owned by third parties which could be incentivized to permit the content provider to employ these third parties’ resources (*e.g.*, network bandwidth

and server hardware and/or software) for less cost, while offloading the investment and maintenance costs to those third parties. '376/7:12-34; 10:17-53; 11:1-19; 14:61-15:9; & 22:13-20. The content provider's system is scalable via the ability to easily add additional incentivized node servers to the network to aid in distributing the content, including that each client that has obtained specified content may then be used as an additional node server for provision of that same content to additional clients. '376/19:66-20:63.

52. Prior art methods for provisioning content over the Internet were likewise inferior. Including as noted herein, back at the time of claimed inventions, distribution of content over networks, including the Internet, were almost entirely via a pure server-client architecture with the central or "core" server handling all communications with any client devices, including as exemplified by the *Kenner* patent and ancillary prior art addressed extensively during prosecution of the '376 Patent. As noted by the inventor during prosecution, the client devices of *Kenner* (*i.e.*, user terminal) communicated only with the server (*i.e.*, PIM) and the server never communicated an identity of any other entity (*i.e.*, DSI) so that the client could request the transmission of the specified content from that other entity rather than the server. The claimed inventions improve and build on this, including because, as noted by the inventor during prosecution, the claimed invention comprises an architecture that provides advantages over these prior art systems, including by permitting client devices to be served by node servers with better and/or more available resources and/or that are more closely located to the client. According to the inventor, this architecture results in, *inter alia*, a vastly improved functionality, efficiency, and reliability of content distribution.

53. Further limitations on network and Internet availability existed at the time, where broadband was in its infancy, and certainly not widespread, with the vast majority of Internet connectivity being achieved through slow, unreliable dial-up networking over phone lines, meaning most Internet users were unable to simply leave a device connected without losing the

availability of a phone line. Thus, the expectations of one's network services being available to a computer at the time were often insufficient to reliably support continuous connectivity and high bandwidth network activity. Similarly, for mobile devices, mobile data and internet connectivity were not as ubiquitous as they are today, and certainly much less able to provide continuous connectivity to permit a user to wait bandwidth to be available. At that time, a user would be motivated to minimize mobile data usage because of high cost and limited bandwidth. Thus, Internet users, both at home and mobile users, sought website that were quick and easy to load and which provided the user with the best desired content without using a lot of bandwidth. As a result, including as noted, it was conventional to provide low data content that was statically delivered from a central core server, including by reducing the quality of content to reduce data size and creating hierarchical links so that specific content could be delivered independent of other content, rather than across a distributed third-party-owned node server architecture. '376/1:57-2:2.

54. As a result, as noted herein, for those conventional systems, which only provided reduced quality content, these resource limitations were less problematic due to the reduced resources necessary to store and deliver the content to client devices. Even for those limited number of conventional systems which employed conventional approaches to addressing these resource limitations, these conventional systems did not fully alleviate the limitations and, in fact, introduced additional limitations which otherwise reduced scalability and reliability of the delivery of content to client devices. Thus, due to these limitations, the convention for the provision of content over networks was, at best, to either cause the data to be so small that it was of poor quality or brute-force the content by throwing costly bandwidth, hardware, and software at the problem. The '376 patented inventions are unconventional in this regard because they went against the conventional method of creating a self-owned ecosystem of bandwidth, hardware, and software to attempt to permit the delivery of high-bandwidth content to multiple clients asynchronously and/or

on-demand, and, instead, provides a method of employing already-existing node servers owned by third parties which provide specified content to only a subgroup of client devices, thus allowing the core server to act as a traffic director, redirecting client devices to a more local node server with its own bandwidth, hardware, and software used to deliver the content to a client device at the specific time the client device requests the content. '376/4:8-24; 5:39-44; 12:48-54; 13:63-67; 19:23-33; 19:48-65; 21:4-43; & 23:1-24:40.

55. Conventional systems had limited ability, if any, to deliver specified content to client devices asynchronously and/or on-demand. '376/2:2-4; 3:61-4:33. Including as noted herein, the provision of statically available content meant that client devices were simply provisioned all of the content that was on a website upon connecting to the website. This, in turn, meant that, for users to ensure they were able to view the specific content they wanted to view, they would have to wait for the entire website to load to see if that specific content loaded as well. Due to limitations at the time, most content was unviewable until the entirety of the content was received, or, if the portion was viewable, the user was left with only a portion of the content. As a result, the content provider's server would be forced to use the same amount of bandwidth for each client device and for the full amount of time the client device was connected, until the full website was delivered to the client device. Specifically, conventional systems had limited ability, if any, to easily and seamlessly permit client devices to pick and choose what content they were delivered. At best, conventional systems limited the content delivered by requiring users cumbersomely click through a series of links until they reached a webpage that only transferred the specific content they sought. As a result, while this, at least partially, addressed the on-demand nature of content delivery, this necessarily increased the time the client device was required to remain connected and increased the bandwidth and other resource usage of the content provider because the client device was required to access many more webpages, each of which would be required to be delivered to the

client device so that the user could navigate to the proper link.

56. With the unreliable Internet of many client devices, conventional systems were cumbersome, burdensome, and hard to use, including because, while a user was waiting for the specified content to be delivered with the entire website, the connection may fail, requiring the user to have to refresh the page and start over. This would, in turn, further unnecessarily increase the bandwidth and other resource usage of the content provider. Similarly, if the content provider's resource limits were reached, the system may crash and/or restart, meaning each of the connected client devices would then attempt to reconnect, and continue crashing the system or, at a minimum, further increase the bandwidth and other resource usage of the content provider. For those systems with hierarchical links, these connectivity issues were, at best, partially alleviated, as the client device was still required to remain connected to the content provider while browsing the link hierarchy and until the specified content was fully delivered.

57. However, by using the network-based methods and systems described in the '376 Patent, these resource limitations could be offloaded onto a number of node servers, increasing both the reliability of the system, as well as the number of concurrent client devices that could connect and access specific content. In this way, the connected time for any individual server and network was reduced, thus reducing the resource usage of that server and network. This is due to the innovative node-server based operation of the '376 patented inventions. '376/Figs. 1 & 2; 3:23-4:33; 5:5-21; 7:12-8:16; 10:17-23; & 13:37-62. System 100 provides an exemplary illustration of the foregoing architecture, including core server 101, node servers 102, and clients 103. '376/Fig. 1; 5:5-21; 7:12-8:16; 10:17-23; & 13:37-62.

58. Among other things, the inventor of the Patent-in-Suit wanted to deliver high-bandwidth content over a network, such as the Internet, in a reliable and scalable way such that any number of client devices would be able to access specified content offered by the content provider while

reducing, or eliminating, issues related to limitations on bandwidth and other resources, including those noted herein. As noted in the specification, "[a]n ongoing problem for content delivery networks is the delivery of high-bandwidth content in a satisfactory manner[, and] delivering full video streams to large audiences (or similar network) so far has been impossible[, where e]xisting systems for delivery of video streams over the Internet suffer from undesirable limitations." '376/1:28-29 & 1:59-63. As further noted in the specification, while some distribution does occur, that content is of low quality, including limited pixel resolutions, short lengths, small frame sizes, and/or low frame rates, and "those Web sites have not delivered customized content (in terms of either the time of delivery—*i.e.*, video on demand—or the actual content delivered." '376/1:63-2:4. Thus, according to the specification, a system was needed "to facilitate the distribution of content over a network" as, *inter alia*, "a single set of high-bandwidth content" or "multiple sets of content at the same time." '376/2:8-24; *see also* '376/3:23-4:33. However, including as noted herein, existing technology offered only unacceptably inferior solutions of provisioning such content to users via the Internet.

59. In one embodiment, the '376 patented inventions comprise core server 101 in communication with each node server 102 and each client 103, all of which are interconnected to form a network via physical (topological) connections, for example, such as the exemplary system shown in Figure 1 of the '376 Patent:

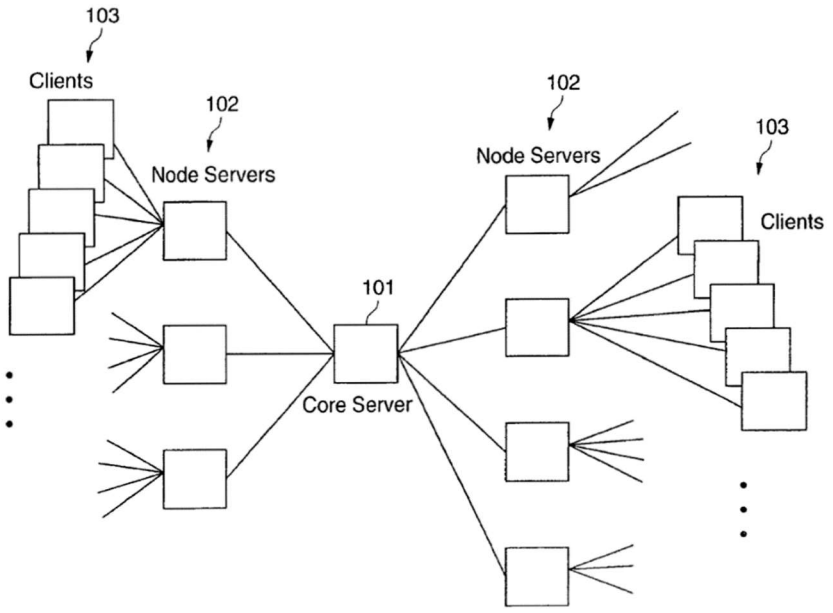


FIG. 1

'376/ Fig. 1; *see also* 5:5-21; 7:12-8:16; 10:17-23; 10:38-67; & 13:37-62. Core server 101 comprises a network site that is controlled (at least in part) by an entity (*e.g.*, a content provider) desiring to distribute content to clients 103 for use on the clients 103. '376/3:33-42; 7:12-45. Any or all of these devices may be embodied by any hardware compatible with the network, such as a stationary computer (*e.g.*, desktop, workstation, etc.), portable computers (*e.g.*, laptop, handheld, personal digital assistant, etc.), portable telephone (*e.g.*, cellular phone, etc.), and television. '376/7:14-28; 7:46-8:16; 10:38-67; 13:29-62. Further, core server 101 may comprise a single server or a combination of servers working in tandem, including any combination of hardware, software, and/or firmware. '376/5:17-21; 7:46-67.

60. Core server 101 communicates with node servers 102, wherein node servers 102 comprise network sites that are not part of core server 101 and serve as an "army" enlisted by core server 101 to aid in distributing content to clients 103. '376/10:17-23. Further, node servers 102 may comprise server systems owned by entities other than the content provider, as well as personal computers of individuals or families. '376/10:38-11:38. Node servers 102 may further comprise a hierarchy of primary node servers and secondary node servers, wherein the hierarchy additionally

assists in distributing the load amongst the clients. '376/12:16-47; 20:15-40. Because the distribution of high-bandwidth content by a content provider would necessarily overwhelm the limited resources of a more centralized server architecture, especially when inundated with communication from a large number of users, the multiple servers set up, including various role-specific sub-servers, would further assist in handling such large amounts of communication, including over the minimal bandwidth at the time. '376/1:49-56; 2:8-24; 3:61-4:33; 10:24-37; 10:54-58; 13:15-36; 18:24-27; 19:19-22.

61. Including as described in the '376 Patent, in order to implement the unconventional architecture of the '376 patented invention, exemplary method 200 is provided, which details the various steps of communications, instructions, and requirements between core server 101, node servers 102, and clients 103. '376/Fig. 2; 5:22-7:11; 23:1-24:40. The steps are performed in a relative order, including as shown in Figure 2 of the '376 Patent.

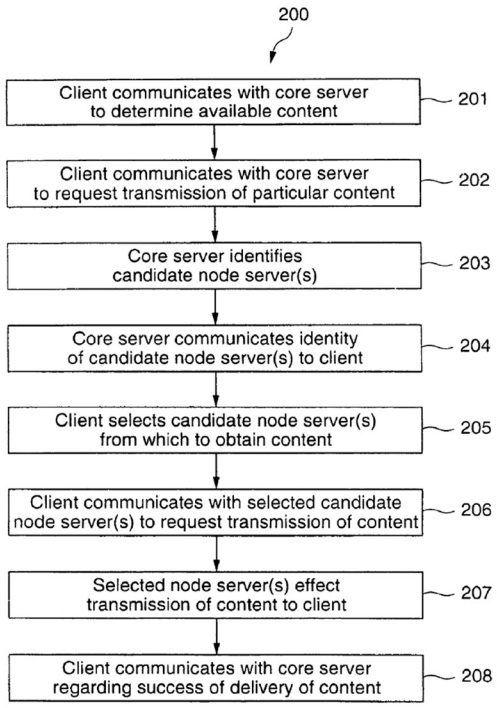


FIG. 2

'376/Fig 2; *see also* '376/5:22-7:11 & 23:1-24:40.

62. At step 201, any one of clients 103 communicate with core server 101 to request the identities of any node servers 102 that contain specific content that the user wishes to view, such as a list of movies available. '376/Fig. 2; 5:30-37; 8:47-50; 13:63-14:10; 17:49-52; & 23:1-24:40.

63. At step 202, any of connected clients 103 request content sought by the user. '376/Fig. 2; 5:38-39; & 13:63-14:10; & 23:1-24:40. Additionally, when client 103 requests the specified content, client 103 may also provide information regarding a specific time that client 103 wishes to receive the content. '376/Fig. 2; 5:39-44; 12:48-54; 13:63-67; 19:23-33; 19:48-65; 21:4-43; & 23:1-24:40.

64. At step 203, core server 101 identifies various node servers 102 containing the specified content. '376/Fig. 2; 5:45-51; 9:13-19; 16:58-64; 14:18-25; 17:49-67; & 23:1-24:40. As part of the determination of relevant node servers 102, core server 101 may consider certain aspects of node servers 102, including network topology, available resources, and/or proximity of each potential node server 102 in relation to client 103. '376/Fig. 2; 5:51-64; 16:4-17:38; 18:1-39; & 23:1-24:40. These characteristics may be stored in a database located on core server 101. '376/Fig. 2; 5:51-57; 6:11-14; 9:1-19; 16:4-17:38; & 23:1-24:40. Further, by considering these characteristics of potential node servers 102, certain advantages of the patented invention are apparent, including that delivery of content from node servers 102 more proximately located to client 103 may avoid bottlenecks in the network and reduce the costs of transmitting the content. '376/5:64-6:11; 19:34-47; & 23:1-24:40.

65. At step 204, after determining the identity of viable node servers 102, core server 101 communicates with client 103 to transfer the identity, for example, the network address or IP address, of the chosen node servers 102. '376/Fig. 2; 6:15-18; 7:1-11; 7:49-52; 8:50-57; 14:18-25; 17:50-54; & 23:1-24:40.

66. At step 205, client 103 determines which of the identified node server 102 from which to

obtain the specified content, including by considering topological and other characteristics of node servers 102. '376/Fig. 2; 6:19-29; 14:18-25; 18:54-20:14; & 23:1-24:40. Notably, this step may be combined with step 204 so that only core server 101 makes the determination and identification of node server 102. '376/7:6-9; 8:60-67; & 23:1-24:40.

67. At step 206, client 103 initiates a connection to selected node server 102 and requests node server 102 begin transmitting the specified content. '376/Fig. 2; 6:30-35; 7:1-11; 14:61-64; 20:64-66; & 23:1-24:40. The request from client 103 may include the identification of the specified content, as well as a specific time client 103 wishes to receive the content, whether immediately or at a future time. '376/Fig. 2; 5:39-44; 6:30-35; 12:48-54; 13:63-67; 19:23-33; 19:48-65; 21:4-43; & 23:1-24:40. Further, if step 204 and step 205 are combined, step 206 may be modified so that core server 101, rather than client 103, contacts node server 102 to instruct node server 102 as to the content sought and any scheduled time. '376/Fig. 2; 7:9-11.

68. At step 207, selected node server 102 begins transmitting the content to client 103 if the user has chosen to have the content received immediately. '376/Fig. 2; 6:36-51; 12:48-54; 21:4-8; 21:23-26; & 23:1-24:40. Otherwise, if the user has chosen to receive the content at a future time, node server 102 delays transmission until both client 103 is connected and the scheduled time occurs. '376/Fig. 2; 6:34-51; 12:64-13:14; 20:64-21:58; & 23:1-24:40. Additionally, in the event node server 102 no longer stores the content at the time the delivery is scheduled, node server 102 may direct client 103 to another known node server 102 that does have the content. '376/Fig. 2; 6:45-51 & 23:1-24:40. Node server 102 may also redirect client 103 if node server 102 determines a more efficient node server 102 exists, such as by considering the noted characteristics above. '376/Fig. 2; 6:45-51; 18:58-65; 19:34-39; 20:27-40; & 23:1-24:40.

69. At step 208, after the scheduled time has passed, client 103 contacts core server 101 to notify core server 101 as to whether client 103 did or did not receive the content as scheduled.

‘376/Fig. 2; 6:52-55; 9:19-43; & 23:1-24:40. This may further include information regarding the speed and length of transmission or other characteristics of the transmission, such as bandwidth and/or latency performance. ‘376/Fig. 2; 6:55-65; 15:17-24; & 23:1-24:40. Alternatively, or in addition, this information may be communicated to core server 101 by node server 102. ‘376/Fig. 2; 6:65-67; 21:59-22:12; & 23:1-24:40. This information is then used by core server 101 to determine whether the transfer was successful, and, if so, whether the owner of node server 102 is to receive the chosen incentive for a transfer. ‘376/Fig. 2; 4:34-47; 9:19-43; 10:3-16; 10:54-67; 13:10-14; & 22:13-24:40.

70. The claimed inventions of the ‘376 Patent have advantages over conventional systems, including, *inter alia*, that they allow a user to more reliably request and view specified content from the content provider via the use of the distributed node server architecture. ‘376/Figs. 1 & 2; 3:23-4:33; 5:5-21; 7:12-8:16; 10:17-23; & 13:37-62. Advantageously, by providing node servers 102 as the intermediary between clients 103 and core server 101, node servers 102 act as a carrier of the data from users to the content provider and vice versa. ‘376/10:17-37. This, in turn, requires the unconventional use of distributed third-party-owned node servers 102, including the managing of information related to the capabilities of each node server 102, the content stored therein and its availability. ‘376/11:56-13:36. Furthermore, where the network connection between a client 103 and core server 101 is potentially somewhat unreliable and lower bandwidth say over a wireless network, the redirection of client 103 to a more reliable and proximately located node server 102 represents an architectural improvement over conventional, pure server-client systems. In this way, the bandwidth-heavy communications overhead of transmitting high-bandwidth content is performed on a far more reliable network, resulting in much less likelihood a user would get logged off prior to the completed transfer or the connection failing, and, furthermore, a diminished amount of traffic occurs on core server 101, effectively permitting more clients 103 to reliably access

specified content. '376/1:49-56; 2:8-24; 3:61-4:33; 10:24-37; 10:54-58; 13:15-36; 18:24-27; 19:19-22; & 19:66-20:63. Thus, the patented tiered-based server system results in a smoother, more reliable, and better user experience.

71. Including as noted above, the specification of the '376 Patent teaches specifically how the technological improvement of the network content distribution systems and methods of the '376 Patent is achieved. Among other innovations, the inventions are able to provide to means for the content provider's system (for example, core server 101), to communicate with a user's device (for example, client 103) and determine what content the user is requesting (for example, step 202); determine an available third-party server (for example, node server 102) to identify which of these third-party servers contains the content sought by the user (for example, step 203); send said identity of the third-party server to the user's device (for example, step 204) so that the user's device can contact and connect to the best third-party servers identified by the content provider (for example, step 205) and request the specified content (for example, step 206); and communicate with the user's device and chosen third-party servers to determine that the third-party servers transmitted the content to the user's device (for example, step 207) and that the user's device successfully received the content (for example, step 208). Thus, the invention details how the improved network content distribution systems and methods can be realized and how its functionality can be accomplished. The claims of the '376 Patent recite how to implement these improved network content distribution systems and methods. Furthermore, the claims require a non-conventional and non-generic method in order to allow for the system to distribute the specified content via the use of distributed third-party node servers. Thus, the claimed inventions of the '376 Patent describe an application specific order of steps for use in a system that is not a generic or conventional arrangement.

72. These claimed limitations disclose a particular architecture and way in which the

provisioning of specified high-bandwidth content over the Internet can be accomplished from a core server to a client via the use of an intermediary node server which receives an incentive as compensation for storing the content and transmitting the content to any client that requests it, rather than requiring the core server to transfer the content to the client, including the specific way the negotiation and communication between the core server, node servers, and client is accomplished, including to provide a distributed network of third-party-owned node servers providing a more reliable and scalable system and providing a better user experience, including by permitting asynchronous and/or on-demand viewing at the client device – as opposed to using conventional systems and methods to provision content over a network, such as those described in the '376 Patent and herein. An example of such architecture and functionality is as shown in Figure 1 of the '376 Patent:

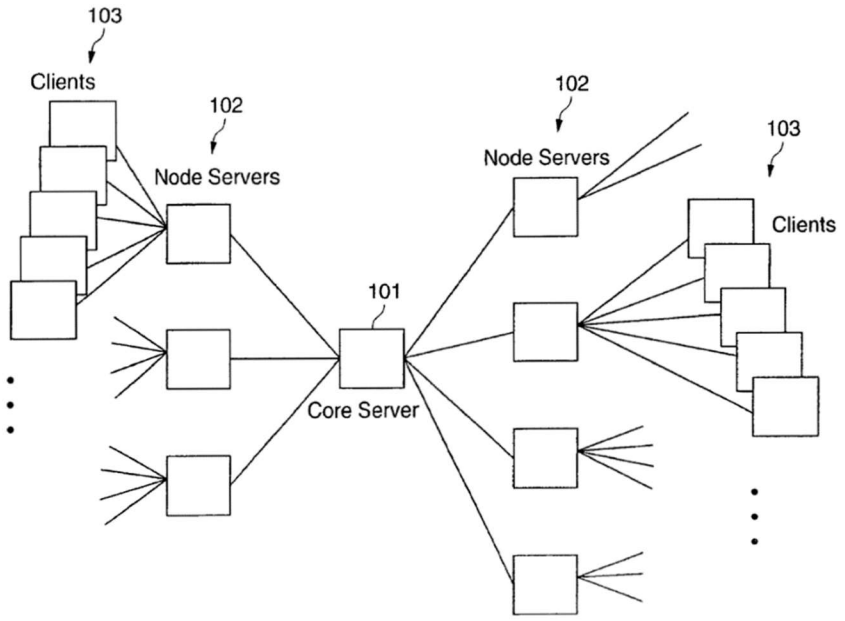


FIG. 1

'376/Fig. 1; *see also* 5:5-21; 7:12-8:16; 10:17-23; 10:38-67; & 13:37-62.

73. On the other hand, including as noted herein, the convention at the time of the '376 patented inventions was to implement one of the three approaches noted above, each of which simply resulted in additional issues being created. This was due to, at least in part, for example,

conventional content providers seeking to invest resources in systems which they entirely owned and managed, often looking to the existing television broadcast-based systems or guidance and/or inspiration. Additionally, conventional content providers sought to avoid the hassle of having to depend on third parties to cache copies of content on the third parties' devices. Including as noted, this resulted in users having unreliable access to content and often resulted in the systems of the content providers crashing or otherwise becoming inoperable.

74. Another unconventional and inventive aspect of the claimed inventions of the '376 Patent includes the use of the node servers to deliver content at times other than when the client is connected to the core server. '376/5:38-44; 12:37-13:14; 21:4-43; & 23:1-24:40. In other words, the use of node servers permits client devices to request and view specified content at a time the user selects. '376/5:38-44; 12:37-13:14; 21:4-43; & 23:1-24:40. Thus, advantageously, the client device is given the identity of a node server or node servers which contain the specific content sought by the user, so that the client device need only connect to the node server or servers to retrieve the content, and the core server is only contacted again during the transfer verification step. In this way, the core server usage is reduced, and, as a result, the use of the content provider's resources is likewise reduced.

75. In turn, this use of node servers for selective delivery, *inter alia*, allows asynchronous and/or on-demand distribution of the content, regardless of the status of the content provider's bandwidth usage and availability, resulting in users being able to view the specified content even when the core server is otherwise inoperable or unreachable. At the time of the '376 patented inventions, the convention was, including as noted herein, to provide such asynchronous or on-demand experience via physical media that the user was required to locate, such as VHS, CDs, and/or DVDs.

B. The Claims Of The '376 Patent Are Directed To Patentable Subject Matter

76. Plaintiff refers to and incorporates the allegations in the above paragraphs as if set forth fully herein.

77. Including as set forth herein, the claims of the '376 Patent are directed to patentable subject matter. The claims of the Patent-in-Suit, including the asserted claims, when viewed as a whole, including as an ordered combination, are not merely the recitation of well-understood, routine, or conventional technologies or components. The claimed inventions were not well-known, routine, or conventional at the time of the invention, over ten years ago, and represent specific improvements over the prior art and prior existing systems and methods.

1. The '376 Patent is not Directed to an Abstract Idea

78. The claims of the '376 Patent neither describe nor claim a concept nor a generic method or computerized system. Instead, the '376 claims address, among other things, a persistent problem with systems for provisioning content over a network at the time of the invention at the time of the invention whereby delivery of content, including high-bandwidth content, to large numbers of client devices asynchronously and/or on-demand in a scalable and reliable manner was unavailable and/or impossible (for example, bandwidth and resource limitations made the ability of a content provider to deliver high-bandwidth content); impractical (for example, requiring content providers to guess traffic loads and requiring large initial investment to meet these loads and/or requiring client devices remain connected for lengthy periods of time using unreliable connections); cumbersome (for example, requiring users browse clunky, confusing hierarchical link systems to find specific content they wish to view); and/or prone to errors (for example, the limited resources made it difficult to deliver content to large numbers of client devices without resulting in system crashes or other errors upon reaching said limits). The '376 patented inventions enable a substantial improvement in content delivery systems, including their functionality and utility.

79. Prior to the '376 patented inventions, content that was delivered was typically of low quality in order to reduce data size and, thus, reduce usage of limited bandwidth and other resources. '376/1:61-2:2. Such reduced quality video provided a poor user experience, as many videos were very short, low resolution, and/or low frame rate, often resulting in a blurry, unwatchable short clip. '376/1:61-2:2. Additionally, and as described herein, this reduced quality content was statically provided, meaning the content was delivered to the client device regardless of whether the user wished to view the content, meaning resources were unnecessarily used in the transfer. '376/2:2-4; 4:13-27.

80. Prior to the claimed inventions, conventional systems required substantial resources on the server side of the content provider in order to operate reliably. Further, including as noted herein, the convention at the time was to use only a system wholly owned, distributed, and maintained by the content provider comprising, at best, fully-mirrored server clusters distributed remotely from the central server due to not only limited computing (*e.g.*, memory and processing power) and network (*e.g.*, bandwidth) resources, but also because, as noted above, one could not be certain that any specific website would contain the specific content sought by the user. Thus, attempts to meet resource requirements meant heavy investment in computing power and bandwidth, each of which was a very expensive proposition at the time. It was far less expensive resource-wise to handle the amount of communications and meet bandwidth requirements by use of distributed servers, especially where those servers were owned by third parties and required the content provider only pay when transfers actually occurred. The specific claimed inventions of the '376 Patent disclose unconventional systems and methods which solve these limitations, including, without limitation, by providing a centralized core server owned by the content provider capable of handling all inbound and outbound connections from client devices requesting content and redirecting them to remotely-located third-party-owned node servers required to be capable of

handling only a subset of all inbound and outbound client device connections.

81. These claimed limitations disclose a particular architecture and way in which the provisioning of specified high-bandwidth content over the Internet can be accomplished from a core server to a client via the use of an intermediary node server which receives an incentive as compensation for storing the content and transmitting the content to any client that requests it, rather than requiring the core server to transfer the content to the client, including the specific way the negotiation and communication between the core server, node servers, and client is accomplished, including to provide a distributed network of third-party-owned node servers providing a more reliable and scalable system and providing a better user experience, including by permitting asynchronous and/or on-demand viewing at the client device – as opposed to using conventional systems and methods to provision content over a network, such as those described in the '376 Patent and herein. 376/Figs. 1 & 2; 3:23-4:33; 5:5-21; 7:12-8:16; 10:17-23; & 13:37-62. An example of such architecture and functionality is as shown in Figure 1 of the '376 Patent:

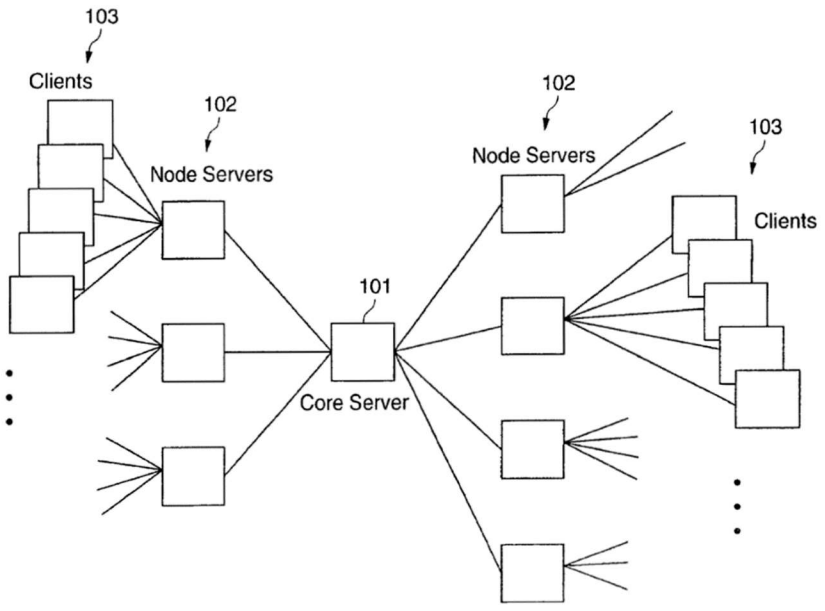


FIG. 1

'376/Fig. 1; *see also* 5:5-21; 7:12-8:16; 10:17-23; 10:38-67; & 13:37-62.

82. More specifically, the claimed inventions of the '376 Patent provide particular methods

and systems for the provision of content over a network that require, for example, "identifying at a core server a network site that will act as a node server for distribution of specified content" and "providing from the core server the specified content to the node server," which specifies the specific way that a node server is provided specific content to be delivered to client devices. '376/Claim 57. The particular methods and systems further require "communicating to the client the identity of a node server having the specified content store thereon, thereby enabling the client to request transmission of the specified content from the node server," which specifies the information exchanged between the devices in order to facilitate the handoff from the core server to the node server and facilitate the transfer of content from the node server to the client device. '376/Claims 37 & 57. The particular methods and systems also require "ascertaining that the node server transmitted the specified content" and "offer[ing] an incentive as compensation [to an owner of the node server] for transmission of the specified content to the client," which serves as a means of ensuring that the handoff was successful and that the transfer actually occurred, including by providing the owner of the node server compensation for retaining the content and/or transferring the content to any client device redirected to the node server. '376/Claims 37 & 57. Including as described herein, these claimed limitations disclose a particular way in which the patented node server-based architecture can be implemented, including specific information transmitted between each of the devices and a verification of transfer to ensure a reliable user experience – as opposed to using conventional methods and systems to deliver content, such as those described in the '376 Patent and herein. '376/Figs. 1 & 2; 3:23-4:33; 5:5-21; 7:12-8:16; 10:17-23; & 13:37-62.

a. The Claims of the '376 Patent are Directed to Innovative Computer- and Network-Based Systems and Methods

83. Plaintiff refers to and incorporates the allegations in the above paragraphs as if set forth fully herein.

84. None of the elements that comprise the claimed apparatuses, systems, computer readable

media, or methods that are described in the claims of the '376 Patent are abstract. Including as described herein, and in the '376 Patent, the computer readable storage media, client, core server, node server, and network interfaces ('376/Figures 1-2 (and associated description in the specification)) are physical and/or tangible things known to a person of ordinary skill in the art ("POSITA") in light of the specification; and in view of the technological solutions and unconventionality noted herein. '376/3:23-60.

85. As exemplified by claim 37, the subject claims of the '376 Patent are directed to:

> 37. A computer readable storage medium or media encoded with one or more computer programs including instructions for effecting the provision of content over a network, comprising:
> instructions for receiving a request from a client for specified content;
> instructions for communicating to the client the identity of a node server having the specified content stored thereon, thereby enabling the client to request transmission of the specified content from the node server; and
> instructions for ascertaining that the node server transmitted the specified content to the client, wherein an owner of the node server is offered an incentive as compensation for transmission of the specified content to the client.

'376/Claim 37.

86. As exemplified by claim 57, the subject claims of the '376 Patent are directed to:

> 57. A method for effecting the provision of content over a network, comprising the steps of:
> identifying at a core server a network site that will act as a node server for distribution of specified content;
> providing from the core server the specified content to the node server;
> receiving at the core server a request from a client for the specified content;
> communicating from the core server the identity of the node server to the client to enable the client to request transmission of the specified content from the node server; and
> ascertaining at the core server that the node server transmitted the specified content to the client, wherein an owner of the node server is offered an incentive as compensation for transmission of the specified content to the client.

'376/Claim 57.

87. Claims 37 and 57 of the '376 Patent, quoted above, are exemplary. A POSITA would

understand that the language of the '376 claims is not directed merely to a method of generically or conventionally provisioning content over a network. Rather, it comprises the specific aspects noted herein which provided the noted inventive, technological solutions to the problems faced by the inventor. Specifically, as noted herein, the claimed inventions provide inventive, unconventional, and technological solutions to the conventional problems of provisioning varying amounts of content of varying sizes to multiple clients asynchronously and/or on-demand in a distributed-server-based system which facilitates the provisioning of content through the distribution of the content from remote node servers which provide the content to clients, thereby spreading the load of the provision of content across multiple networks and servers.

b. The '376 Claimed Inventions Could not be Done Manually or in One's Head

88. Plaintiff refers to and incorporates the allegations in the above paragraphs as if set forth fully herein.

89. A POSITA would understand that the claimed solutions could not be done manually, including because they necessarily require implementation via specialized, or specially programmed, computers, including one or more networks, a core server, a node server, and, further, including at least communicating the identity of a node server to a client and transmitting the selected content from the node server to the client ('376/Claim 37; Figs. 1 & 2; 1:49-56; 2:8-24; 3:23-4:47; 5:5-8:16; 8:47-50; 8:60-67; 9:1-43; 10:3-11:38; 11:56-14:25; 14:61-64; 15:17-24; 16:4-17:38; 17:49-67; 18:1-39; & 18:54-24:40); and providing specified content to an identified node server, communicating the identity of the node server to a client, and transmitting the selected content from the node server to the client ('376/Claim 57; Figs. 1 & 2; Figs. 1 & 2; 1:49-56; 2:8-24; 3:23-4:47; 5:5-8:16; 8:47-50; 8:60-67; 9:1-43; 10:3-11:38; 11:56-14:25; 14:61-64; 15:17-24; 16:4-17:38; 17:49-67; 18:1-39; & 18:54-24:40), nor can they be performed in a person's head. Furthermore, for example, the constant open connectivity required for sending and receiving the

specified content from the node server at each of the clients is not something that could be done manually or in one's head.

2. The '376 Claimed Inventions Provide Innovative, Unconventional Concepts and Technological Solutions

90. Plaintiff refers to and incorporates the allegations in the above paragraphs as if set forth fully herein.

91. In sum, including as noted herein, the claimed technologies of the Patent-in-Suit improved, *inter alia*, prior computer and networking technology, including in connection with, among other things:

A. Improving and increasing efficiencies of the claimed inventions, including over inferior alternative means for achieving the same or similar ends of distributing content, including by reducing or eliminating the cumbersome steps of previous methods of content transfer over the Internet and providing the ability to transfer the specified content at a time chosen by the user where a connection to the Internet may be more readily available. *See, e.g.*, '376/Figs. 1 & 2; 3:23-4:33; 5:5-21; 7:12-8:16; 10:17-23; & 13:37-62.

B. Leveraging the capabilities of already-existing third-party devices, including their Internet connection capabilities (including through use of custom hardware and/or software), including by shifting the transfer of data from the core server to the node servers, to greatly enhance the functionality of content distribution systems, including because the node servers, with may be more proximately located to the client and have additional resources to the core server, may then store the specified content for transfer to the client via the Internet at a later time. *See, e.g.*, '376/Figs. 1 & 2; 1:49-56; 2:8-24; 3:23-4:33; 5:5-21; 7:12-8:16; 10:17-37; 10:54-58; 13:15-62; 18:24-27; & 19:19-22.

C. Providing an incentive-based system to permit the content provider to ensure the

specified content was successfully transferred from the node server to the client, including by varying the incentive based on the amount of the content transferred and the quality thereof. *See, e.g.*, '376/Fig. 2; 4:34-47; 6:52-67; 9:19-43; 10:3-16; 10:54-67; 13:10-14; 15:17-24; & 21:59-24:40.

92. The '376 patented inventions also provide computer and network efficiency at least because they allow content provisioning systems to have the useful and improved claimed functionality without the need for the content provider to heavily invest in resources, such as bandwidth, hardware, and/or extra software and data processing required on the core server. The inventor did more than simply apply current technology to an existing problem. The inventions, as embodied in the claims of the '376 Patent, were a significant advancement in content provisioning systems and methods. The inventions covered by the claims of the '376 Patent comprise utilization of the Internet to create a novel architecture enabling provision of content, including high-bandwidth content, by node servers in which a third party has already invested to provide resources for quickly, easily, and reliably transferring content to client over the Internet, and, more specifically, to what is essentially the backbone of what is referred to today as distributed network "streaming."

93. These noted improvements over the prior art represent meaningful limitations and/or inventive concepts based upon the state of the art over two decades ago. Further, including in view of these specific improvements, the inventions of the claims of the '376 Patent, when such claims are viewed as a whole and in ordered combination, are not routine, well-understood, conventional, generic, existing, commonly used, well known, previously known, typical, and the like over two decades ago, including because, until the inventions of the claims of the Patent-in-Suit, the claimed inventions were not existing or even considered in the field, and, in fact, went against the conventional methods.

94. The claims of the '376 Patent, including as a whole and where applicable in ordered combination, comprise, *inter alia*, a non-conventional and non-generic arrangement of communications between node servers and client devices that is a technical improvement to the communications between the devices and content distribution services, including those improvements noted herein.

95. The claimed inventions are necessarily rooted in computer technology, *i.e.*, network content provisioning technology, and comprise improvements over prior technologies in order to overcome the problems, including those noted herein, specifically arising in the realm of computer networks. The claimed solutions amount to an inventive concept for resolving the particular problems and inefficiencies noted herein, including in connection to provisioning content from a content provider to client over the Internet, including as described.

a. The '376 Claimed Inventions Provide Technological Solutions to Technological Problems

96. Plaintiff refers to and incorporates the allegations in the above paragraphs as if set forth fully herein.

97. The technical problems addressed by the claimed inventions of '376 Patent include the delivery of content, including high-bandwidth content, to large numbers of client devices asynchronously and/or on-demand in a scalable and reliable manner, which, at the time of the '376 patented inventions, was difficult, impractical, and/or cumbersome, including because, as noted herein, provisioning content over a network at the time was unavailable and/or impossible (for example, bandwidth and resource limitations made the ability of a content provider to deliver high-bandwidth content); impractical (for example, requiring content providers to guess traffic loads and requiring large initial investment to meet these loads and/or requiring client devices remain connected for lengthy periods of time using unreliable connections); cumbersome (for example, requiring users browse clunky, confusing hierarchical link systems to find specific content they

wish to view); and/or prone to errors (for example, the limited resources made it difficult to deliver content to large numbers of client devices without resulting in system crashes or other errors upon reaching said limits). Conventional methods further lacked the ability to provide a distributed network of servers from which the user could request and access specified content asynchronously and/or on-demand. Further, physical limitations existed which limited available resources, including bandwidth, storage, and computing power, which could result in the system being unworkable or crashing.

98. An additional problem that existed with conventional systems was the use of fraudulent logs by the owners of content provided by content providers. For example, conventional systems at the time often included the provision of content in the form of advertisement banners throughout a webpage. At the time, there were webpages that would load with a parade of banner advertisements filling up the user's screen, and, each time the advertisement was loaded, the webpage owner would be paid for displaying the advertisement. However, due to the overwhelming nature of webpages with numerous banner advertisements, users would often leave the webpage before all of the advertisements loaded. Thus, to get around this, webpage owners began creating fraudulent logs to indicate the banner advertisements were loaded, but the advertisement providers had no way of verifying this. As a result, advertisement providers were often forced to pay for views of their content that simply never occurred.

99. Technical solutions provided by the claimed inventions of the '376 Patent to the technical problems faced include the use of a distributed node server architecture wherein the node servers may be added to a vast "army" of third-party servers for use in distributing content to client devices; the identification and maintenance of a list of node servers by the core server and transfer, from the core server to the client device, of the identity of selected, most proximate and/or available node servers which contain the specified content sought by the user; the use of incentives as

compensation to the owners of the node servers for the use of their additional resources; and the communication of a successful transfer of the specified content between the identified node server, or node servers, and the client device, including in order to ensure the user was able to receive the content and determine whether the chosen incentive should be given to the owner of the node server by the content provider. '376/ Figs. 1 & 2; Figs. 1 & 2; 1:49-56; 2:8-24; 3:23-4:47; 5:5-8:16; 8:47-50; 8:60-67; 9:1-43; 10:3-11:38; 11:56-14:25; 14:61-64; 15:17-24; 16:4-17:38; 17:49-67; 18:1-39; & 18:54-24:40. Including as noted herein, this, in turn, provides the ability for client devices to be served by node servers with better and/or more available resources and/or that are more closely located to the client, including by employing already-existing node servers owned by third parties which provide specified content to only a subgroup of client devices, thus allowing the core server to act as a traffic director, redirecting client devices to a more local node server with its own bandwidth, hardware, and software used to deliver the content to a client device at the specific time the client device requests the content. '376/Figs. 1 & 2; 1:49-56; 2:8-24; 3:23-4:47; 5:5-8:16; 8:47-50; 8:60-67; 9:1-43; 10:3-11:38; 11:56-14:25; 14:61-64; 15:17-24; 16:4-17:38; 17:49-67; 18:1-39; & 18:54-24:40.

100. The inventions claimed in the '376 Patent further represent specific improvements in the functionality and capabilities of computer networking, databases, video distribution services, and web services and networks, including in regard to network content distribution services, systems, and network databases, including a network location database. The inventions claimed in the '376 Patent, for example, improve the functionality of network database systems, for example, by facilitating or allowing the core server to maintain a list of node servers, and their respective available resources, proximity, availability for use, content stored thereon, and other information, including so that the foregoing information may be used to provide the client device with the identity of the most reliable node server which can provide the specified content sought by the

user. '376/Fig. 2; 5:51-64; 6:11-14; 9:1-19; 16:4-17:38; 18:1-39; & 23:1-24:40.

101. The inventions claimed in the '376 Patent further represent specific improvements in the functionality and capabilities of computer databases, video distribution services, and web services and networks, including in regard to network content distribution services, systems, and network databases, including a network location database. The inventions claimed in the '376 Patent, for example, improve the functionality of video distribution services and network database systems, for example, by facilitating or allowing the core server to audit and/or otherwise verify whether specified content requested by the user was actually transferred between a node server and client, including via the core server communicating with either or both the node server and client to request confirmation of the transfer. '376/Fig. 2; 4:34-47; 6:52-67; 9:19-43; 10:3-16; 10:54-67; 13:10-14; 15:17-24; & 21:59-24:40. As a result, the content provider is able to limit payment of incentive compensation only to content that has actually been transferred. '376/Fig. 2; 4:34-47; 6:52-67; 9:19-43; 10:3-16; 10:54-67; 13:10-14; 15:17-24; & 21:59-24:40.

102. Including as described in the '376 Patent, and as noted herein, the claimed inventions include unconventional and inventive technological solutions to the technical problems that existed at the time, including to increasing and/or improving, for example, ease-of-use, functionality, efficiency, and reliability in systems for content distribution over a network and network databases. For example, the claimed inventions of the '376 Patent, including as described herein, provide technical solutions that improve, *inter alia*, computer and database technology, including for distribution of high-bandwidth content over a network, including by providing a distributed network of third-party-owned node servers providing a more reliable and scalable system and providing a better user experience, including by permitting asynchronous and/or on-demand viewing at the client device. In this way, the claimed inventions of the '376 Patent reduce the use of the content provider's computing devices (*e.g.*, servers) and resources thereon, including the

use of the content provider's and user's network traffic (*e.g.*, bandwidth) – which, including as noted herein, was highly limited at the time of the patented inventions, especially on mobile networks, and often costly and not always available – because the content provider is not required to maintain connections with every client the entire time the specified content is being transferred to the client, including because such transfers are offloaded to the node servers. As noted herein, specifically with respect to home devices and mobile devices, it was often not possible to continually maintain a network connection, especially in view of the potential for the content provider's servers to become unreachable due to crashing or otherwise, resulting in the client device having to attempt to reconnect before the content was fully delivered. The inventions of the '376 Patent provide a technical solution to this problem by offloading the large number of connections from the core server onto a distributed system of node servers, each of which serves only a small portion of the total amount of clients.

b. The '376 Claimed Inventions Provide Unconventional Solutions

103. Plaintiff refers to and incorporates the allegations in the above paragraphs as if set forth fully herein.

104. Including as noted herein, what was conventional at the time comprised, for example, pure single server-client systems, pure multi-server single-client systems, and singularly-owned distribution systems, which, at best, either caused the data to be so small that it was of poor quality or brute-forced the content by throwing costly bandwidth, hardware, and software at the problem, including as shown in the prior art systems described in the specification, including the cited *Kenner* reference, and herein. However, including due to limitations on available resources and the lack of consistent, reliable, and scalable systems to provide a reliable user experience, users seeking high-bandwidth content were often simply unable to do so because it was unavailable because content providers simply did not, because they could not, provide it. Further, a user was

unable to choose when they viewed the specified content absent some clever, yet burdensome, methodology of calculating exactly how long the transfer would take, connecting at the exact time necessary so the file would be available when the user wished, and hoping the transfer completed without issue, such as disconnection. By leveraging network and web-based systems, the patented inventions improved upon the conventional methods of distribution of high-bandwidth content over a network, which suffered from the many issues noted herein.

105. Unconventional solutions provided by the claimed inventions of the '376 Patent include the leveraging of the resources, such as bandwidth and computing power and/or storage, of third-party-owned computing devices in order to create a distributed network of servers which may store various content offered by the content provider so that the node servers, rather than the core server, are required to maintain a connection with the client devices for transfer of specified content. Including as set forth in the specification of the '376 Patent, the bandwidth-heavy communications overhead of transmitting high-bandwidth content is performed on a far more reliable network, resulting in much less likelihood a user would get logged off prior to the completed transfer or the connection failing, and, furthermore, a diminished amount of traffic occurs on the core server, effectively permitting more clients to reliably access specified content. '376/Figs. 1 & 2; 1:49-56; 2:8-24; 3:23-4:33; 5:5-21; 7:12-8:16; 10:17-37; 10:54-58; 13:15-62; 18:24-27; & 19:19-22.

106. The patented inventions of the '376 Patent further provided unconventional solutions by at least leveraging the use of incentives in order to recruit third parties to provide the use of their resources, such as bandwidth and computing power and/or storage, and ensuring the content was transferred in order to correctly award incentives for successful transfers. '376/Fig. 2; 4:34-47; 6:52-67; 9:19-43; 10:3-16; 10:54-67; 13:10-14; 15:17-24; & 21:59-24:40. Including as noted herein, and as argued during prosecution of the '376 Patent, it was unconventional to have distributed, server-based and/or network-based systems which were provide built via the use of

incentives to third parties for the user of already-existing resources, as opposed to the conventional method of content providers expending both money, including in infrastructure expense and ongoing operation costs, and available resources in order to meet traffic demands.

107. Further, the asserted claims of the '376 Patent claim unconventional systems, computer readable media, and methods which provide a distributed network of third-party-owned node servers providing a more reliable and scalable system and providing a better user experience, including by permitting asynchronous and/or on-demand viewing at the client device – as opposed to using conventional systems and methods to provision content over a network, such as those described in the '376 Patent and herein.

c. The '376 Claimed Inventions Provide Technological Solutions to Technological Problems

108. Plaintiff refers to and incorporates the allegations in the above paragraphs as if set forth fully herein.

109. The claimed content provisioning systems and methods of the '376 Patent provide a number of benefits over conventional systems and methods, including conventional pure single server-client systems, conventional pure multi-server single-client systems, and conventional singularly-owned distribution systems. These benefits include the ability of the content provider to accommodate vastly more client devices; provide a larger amount of content using the same resources; provide improved quality and sized content; provide content to client devices in an asynchronous and/or on-demand manner; reduced costs to content providers for implementing and maintaining their systems; distributing the resource load across all node servers; exponential reduction in amount of streams by requiring only a single transmission to each client by the node server; permitting the distribution of content via transmission at off times, rather than precisely when the client connects; better scalability and the ability to add node servers in an exponential growth; providing a feedback mechanism to ensure the content was actually delivered via strong

compensation mechanisms; improved system reliability to client devices; and/or cost-savings for client devices by reducing the amount of data used and/or connectivity time. '376/Claims 37 & 57.

110. In addition, conventional systems and methods required heavy investment by the content provider as the amount or scale of the servers increases, meaning the content provider was required to pay for additional hardware and/or software as well as the maintenance costs therefor, including because, at the time, the convention was not to have idle bandwidth available because the enormous expense of bandwidth meant such idle bandwidth was money wasted. The claimed inventions of the '376 Patent allow, for example, the system to distribute the specified content via the use of distributed third-party node servers, thus, *inter alia*, offloading and reducing resource usage of the content provider's servers, resulting in less investment needed by the content provider. The claimed inventions of the '376 Patent further allow, for example, asynchronous and/or on-demand distribution of the content, regardless of the status of the content provider's bandwidth usage and availability, resulting in users being able to view the specified content even when the core server is otherwise inoperable or unreachable. The claimed inventions of the '376 Patent allowed devices with lower bandwidth and intermittent internet connectivity, such as dial-up and wireless or mobile devices, to work reliably with distributed content systems when requesting and receiving content from the content provider's server, including because the connectivity to the content provider's systems was done on a reliably connected, more proximately, located third-party server.

d. The '376 Claimed Inventions Provide Technological Solutions to Technological Problems

111. Plaintiff refers to and incorporates the allegations in the above paragraphs as if set forth fully herein.

112. Consistent with the above discussion, including the problems solved that had been faced by conventional content provisioning systems and provisioning content to clients over a network,

and further in consideration of the '376 Patent specifications, the prosecution history, and cited prior art, a POSITA would understand that the claimed "[core server] identifying…a network site that will act as a node server for distribution of specified content; [to] provid[e]…the specified content to the node server; [so that the core server can]…receiv[e]…a request from a client for specified content;…communicat[e] to the client the identity of the node server having the specified content…enabling the client to request transmission of the specified content from the node server; and…ascertain[] that the node server [has] transmitted the specified to the client, wherein an owner of the node server is offered an incentive as compensation for transmission of the specified content to the client," including based on the use of a distributed node server architecture, and including in combination with the claims of the '376 Patent, as a whole, is an inventive technological solution, including in view of the benefits and unconventional solutions this involves and contributes to. '376/Claim 1; Figs. 1 & 2; 1:49-56; 2:8-24; 3:23-4:47; 5:5-8:16; 8:47-50; 8:60-67; 9:1-43; 10:3-11:38; 11:56-14:25; 14:61-64; 15:17-24; 16:4-17:38; 17:49-67; 18:1-39; & 18:54-24:40.

113. For example, using certain technology claimed in the '376 Patent, (for example, the core server and node server in conjunction), it becomes possible to, among other things, provide the node server with content requested by client devices so that client devices may request and obtain specified content from the node server at a more preferential time for the client device, such as during off-peak hours or when the client device has a more stable connection. '376/Figs. 1 & 2; 1:49-56; 2:8-24; 3:23-4:47; 5:5-8:16; 8:47-50; 8:60-67; 9:1-43; 10:3-11:38; 11:56-14:25; 14:61-64; 15:17-24; 16:4-17:38; 17:49-67; 18:1-39; & 18:54-24:40.

114. The '376 claimed inventions comprise inventive improvements over prior technologies in order to overcome problems, including those technical problems noted herein, related to computer networks, content distribution, and database management (for example, related to

content providers) including in combination with the provision of high-bandwidth content over the Internet from a content provider to many clients, the ability to provide clients with multiple pieces of content, and the ability to access and communicate with the user's client device at various times, including in order to distribute content at a time chosen by the user, including via a network which is accessible via a web browser or similar functionality. For example, the claimed inventions provide inventive solutions related to the conventional issues and inefficiencies (for example, as described herein) that were related to distributing large amounts of content and/or content to large numbers of clients (for example, high-bandwidth content from content providers) over a network, such as the Internet, via the use of third-party-owned, distributed node servers, including storing and/or maintaining relevant characteristics regarding the node servers (for example, bandwidth, resources, proximity to a client, etc.) in a node server database and which may be accessible via a network (for example, the Internet) such as through a web server. Further, the use of the feedback compensation system provides the content provider a means of ensuring the content was successfully received by the client, avoiding the issue of conventional systems where false transfer logs resulted in content providers paying for transfers that never actually occurred.

115. The '376 patented inventions further provide inventive improvements in network, including distributed content network, architecture, including because the unconventional multiserver-server-client architecture and shifting of communications and workload from a centralized server to a distributed node server system improve over the conventional, proprietary singular server-client architecture. Including as noted herein, in doing so, the claimed inventions reduce the workload of the content provider's servers and use of the content provider's limited resources by providing for various tasks to be run and take place on the distributed node servers which act as intermediaries. Specifically, a POSITA would understand that the avoidance of overloading the available resources of the content provider, including by offloading onto a tiered

architecture of node servers, was inventive and serves as an improvement in network, including distributed content network, architecture. Further, the use of an incentive to aid in recruiting additional third parties to provide the user of the already-existing resources was inventive. Further, the use of a feedback notice informing the core server that the node server successfully transferred the entirety of the specified content, including so that the owner of the node server was properly provided the chosen incentive, was inventive and serves as an improvement in network, including distributed content network, architecture.

3. The Claims of the Patent-in-Suit do not Unreasonably Preempt their Respective Fields

116. Plaintiff refers to and incorporates the allegations in the above paragraphs as if set forth fully herein.

117. Including as noted herein, the '376 Patent does not claim merely the abstract idea of "provisioning content over a network" that provides no inventive concept. Instead, the '376 Patent claims specific methods and systems for provisioning specifically selected content, including from a node server containing the specific content selected by the client, including via a core server receiving a request from a client to view specific content and directing the client to connect to a specific node server containing that content so that the client may receive the content from the node server, and determining that the selected node server has transmitted the selected content to the client where infringement of the patent claims can be readily avoided while still practicing any alleged abstract idea, given that the patent claims do not purely read on any alleged abstract idea. Indeed, the claims of the '376 Patent do not provision content as in the prior art, but, instead, provision content by a core server providing the content to distributed node servers to provision to clients as discussed extensively herein.

118. For example, "provisioning content over a network" may be practiced outside of the limited scope of the patent claims at least by:

A. The use of a system such as that described in the *Kenner* reference (U.S. Patent No. 5,956,716), cited by the patent examiner;

B. The use of a system such as that described in the *Guenthner* reference (U.S. Patent No. 6,135,588), cited by the patent examiner;

C. The use of distributed core servers;

D. The use of a system which permits a client to download content over time and/or in the background and view the content at a later time;

E. The use of a content capturing device located within the client as the content is provisioned;

F. The use of pre-loaded client devices a user may obtain and view the content; and/or

G. The use of a system which staggers the provisioning to clients in an ordered queue.

COUNT I – INFRINGEMENT OF U.S. PATENT NO. 7,650,376

119. Plaintiff refers to and incorporates the allegations in the above paragraphs as if set forth fully herein.

120. Plaintiff is the assignee of the '376 Patent and it has all substantial rights to the '376 Patent, including the right and standing to sue and recover damages for past, present, and future infringement of the patent.

121. Claim 37 of the '376 Patent covers a computer readable storage medium or media comprising said medium or media "encoded with one or more computer programs including instructions for effecting the provision of content over a network, comprising: instructions for receiving a request from a client for specified content; instructions for communicating to the client the identity of a node server having the specified content stored thereon, thereby enabling the client to request transmission of the specified content from the node server; and instructions for ascertaining that the node server transmitted the specified content to the client, wherein an owner

of the node server is offered an incentive as compensation for transmission of the specified content to the client."

122. Claim 57 of the '376 Patent covers a method comprising said "method effecting the provision of content over a network, comprising the steps of: identifying at a core server a network site that will act as a node server for distribution of specified content; providing from the core server the specified content to the node server; receiving at the core server a request from a client for the specified content; communicating from the core server the identity of the node server to the client to enable the client to request transmission of the specified content from the node server; and ascertaining at the core server that the node server transmitted the specified content to the client, wherein an owner of the node server is offered an incentive as compensation for transmission of the specified content to the client."

A. Infringement Via Crackle Application

123. Crackle has infringed, and is now infringing, the '376 Patent, including at least claims 37 and 57, in this judicial district and elsewhere, in violation of 35 U.S.C. § 271 through actions comprising the practicing, without authority from Plaintiff, systems and methods for obtaining and aggregating contact information from a plurality of messaging services providers via Crackle's Crackle Application system, including associated hardware, firmware, and/or software, including as claimed in the '376 asserted claims. On information and belief, Crackle practices the claimed methods and provides the claimed systems with and via its Crackle Application system comprising the Crackle website at www.crackle.com; the Crackle Android mobile application; the Crackle iOS mobile application; the Crackle smart device application; the Crackle console application; and/or the Crackle streaming device application.

124. Without limitation, the accused system comprising the Crackle Application system that comprises a computer readable medium or media encoded with one or more computer programs

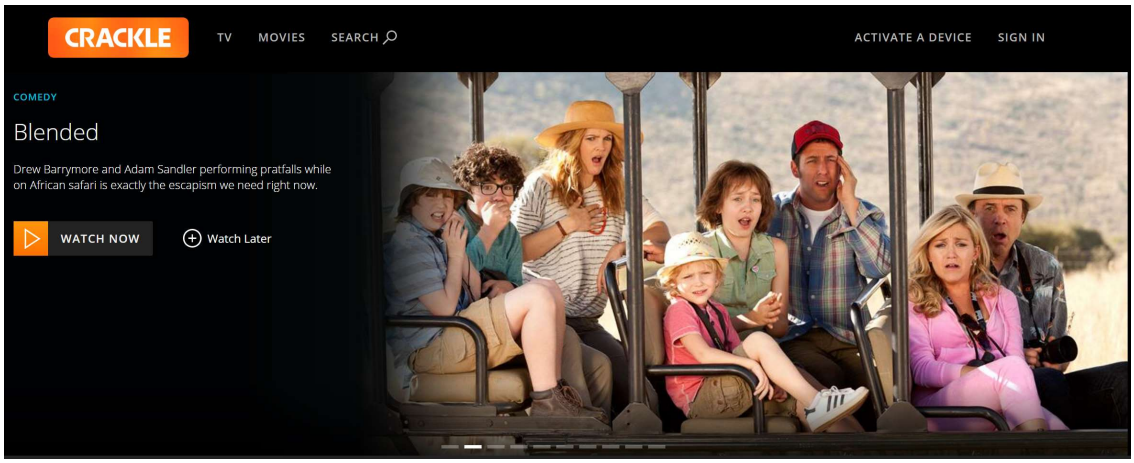
including instructions for effecting the provision of content over a network, comprising: instructions for receiving a request from a client for specified content; instructions for communicating to the client the identity of a node server having the specified content stored thereon, thereby enabling the client to request transmission of the specified content from the node server; and instructions for ascertaining that the node server transmitted the specified content to the client, wherein an owner of the node server is offered an incentive as compensation for transmission of the specified content to the client.

125. Without limitation, and for example, the accused instrumentality comprising the Crackle Application system practices said methods to effect the provision of content over a network, comprising the steps of: identifying at a core server a network site that will act as a node server for distribution of specified content; providing from the core server the specified content to the node server; receiving at the core server a request from a client for the specified content; communicating from the core server the identity of the node server to the client to enable the client to request transmission of the specified content from the node server; and ascertaining at the core server that the node server transmitted the specified content to the client, wherein an owner of the node server is offered an incentive as compensation for transmission of the specified content to the client.

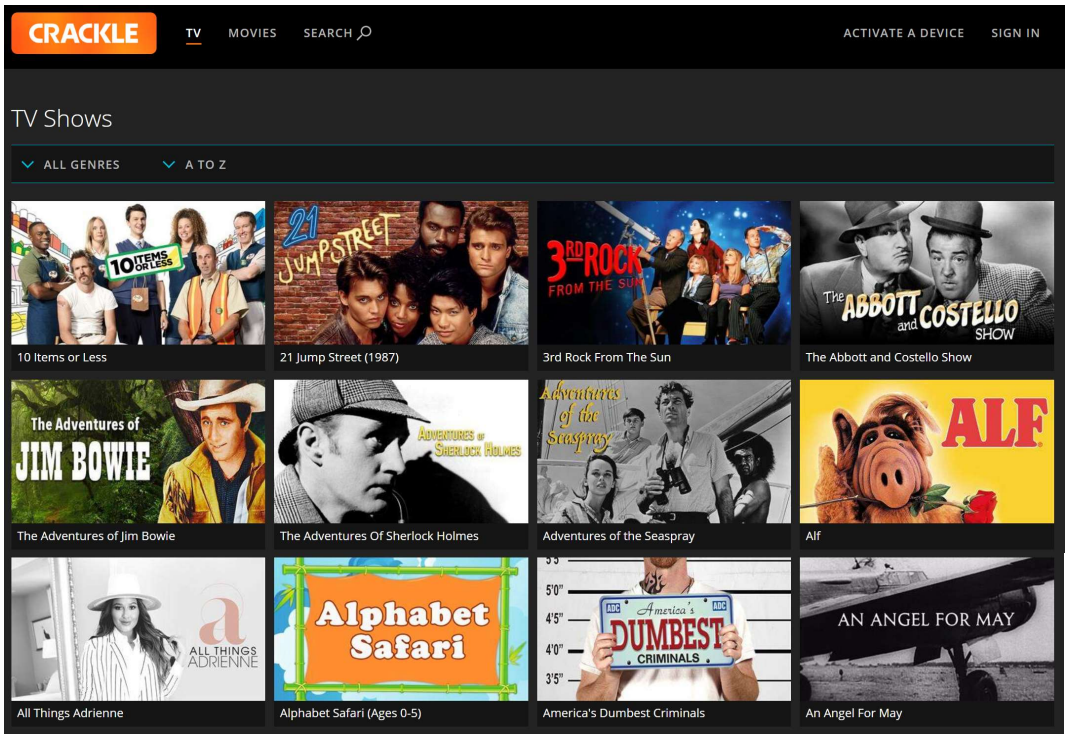
126. Further, the Crackle Application system comprises computer readable storage media and methods which permit Crackle's server to identify a remote server to which the Crackle Application system provides specified content such that a client may request specified content from Crackle's server, which directs the client to the node server containing the specified content so that the client may obtain the specified content from the node server, wherein Crackle's server is notified by the node server that the content has been transferred and the owner of the node server is offered an incentive as compensation for the transmission thereof.

127. For example, the Crackle Application system permits the streaming of media content over

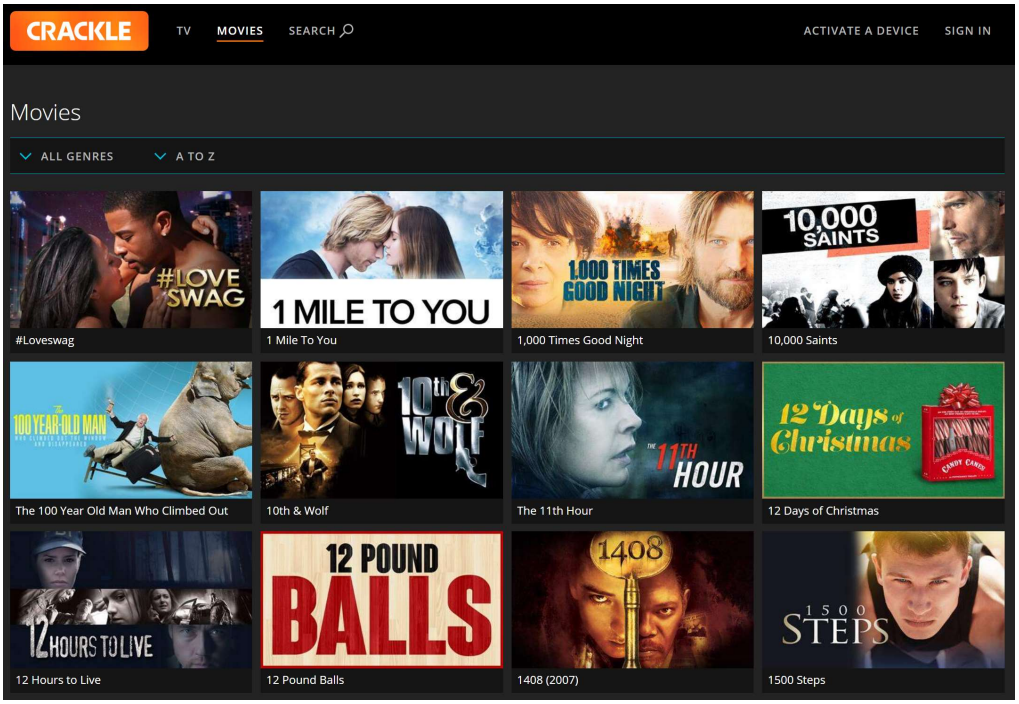
a network from third-party servers to a user's device, wherein said streaming occurs, *inter alia*, via Crackle's servers providing the identity of a third-party server to the user's device, in response to the user's request to view media content provided by Crackle, wherein the server identified is one which contains the content requested:



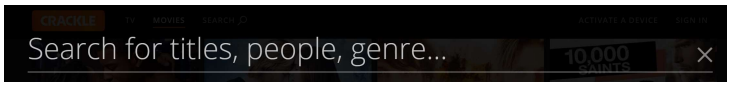
See, e.g., Crackle website located at https://www.crackle.com/

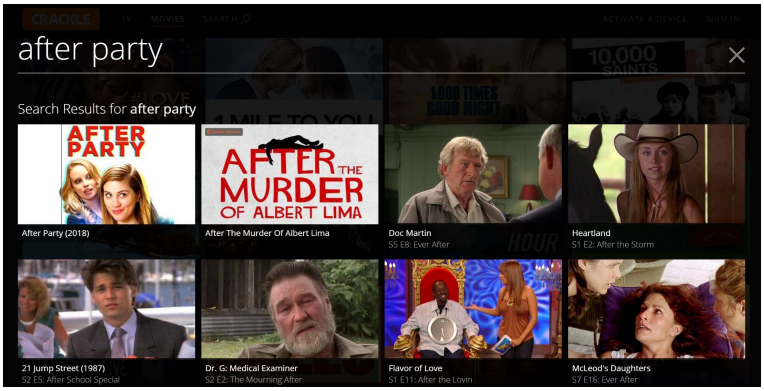


See, e.g., Crackle website located at https://www.crackle.com/shows

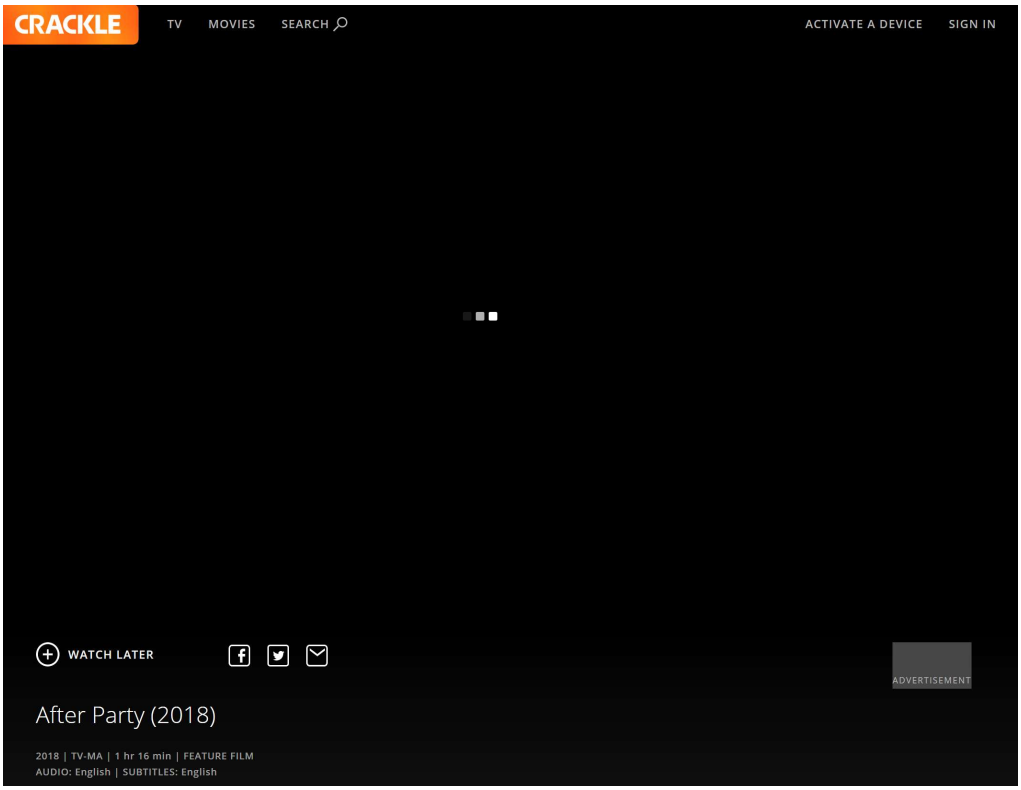


See, e.g., Crackle website located at https://www.crackle.com/movies

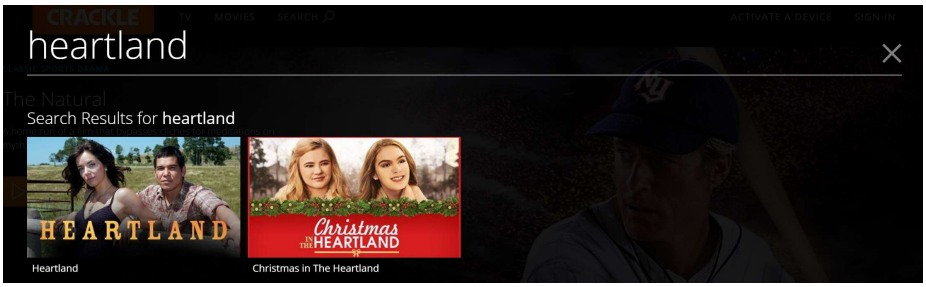




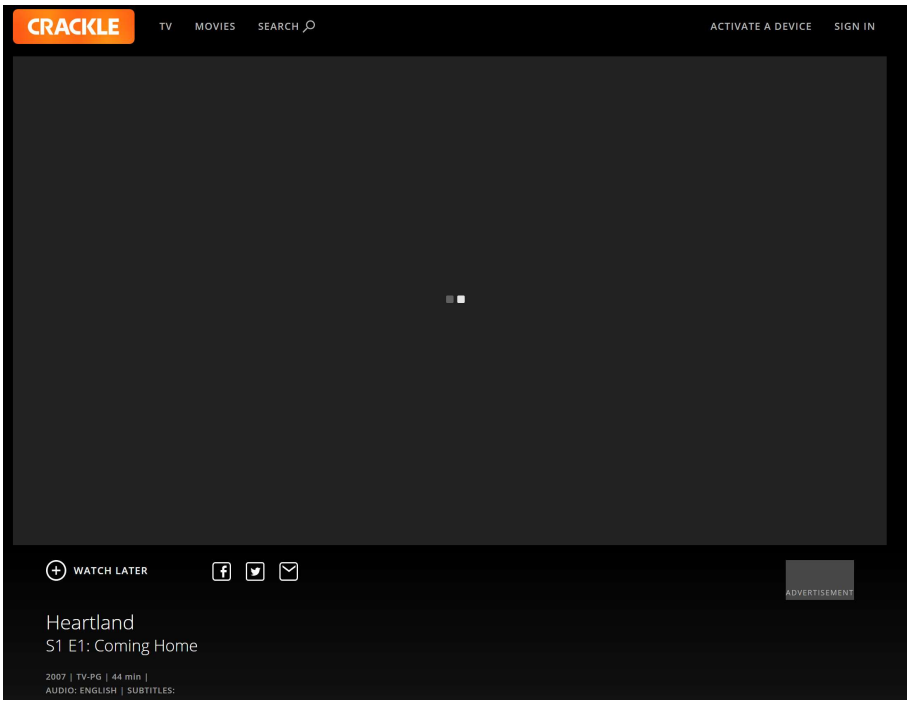
See, e.g., Crackle website located at https://www.crackle.com/movies



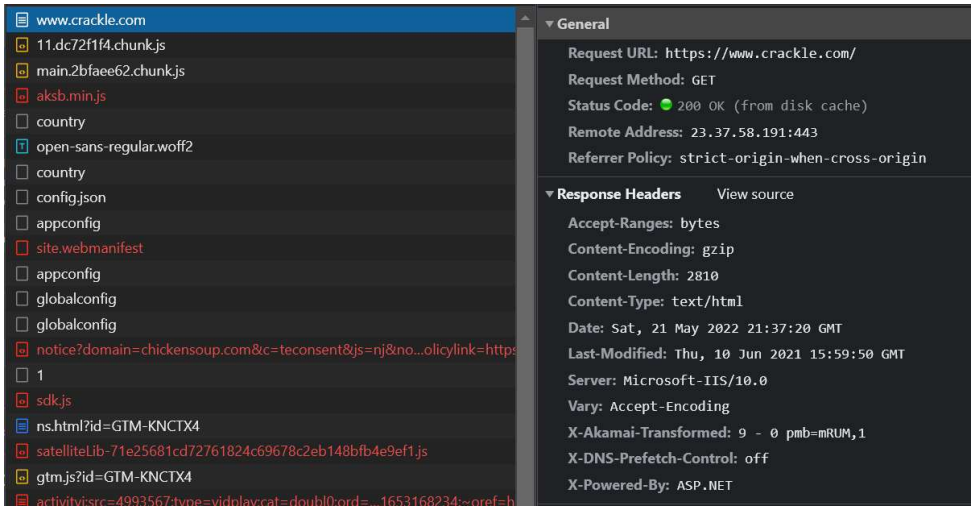
See, e.g., Movie Player page for "After Party" on Crackle website located at https://www.crackle.com/watch/7387



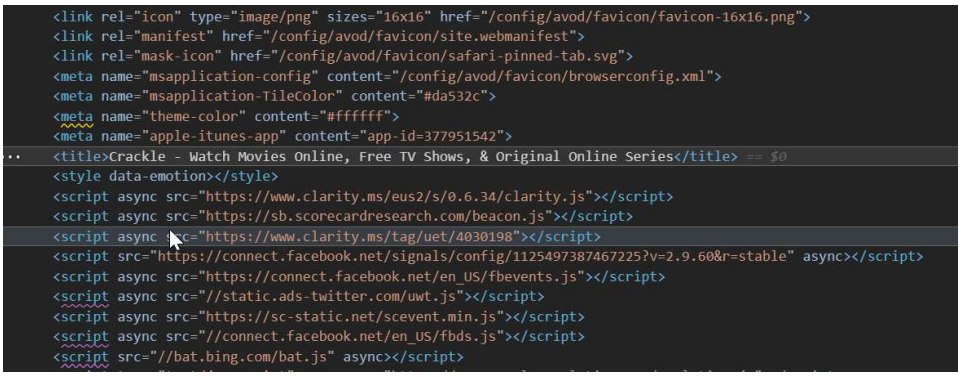
See, e.g., Crackle website located at https://www.crackle.com/movies

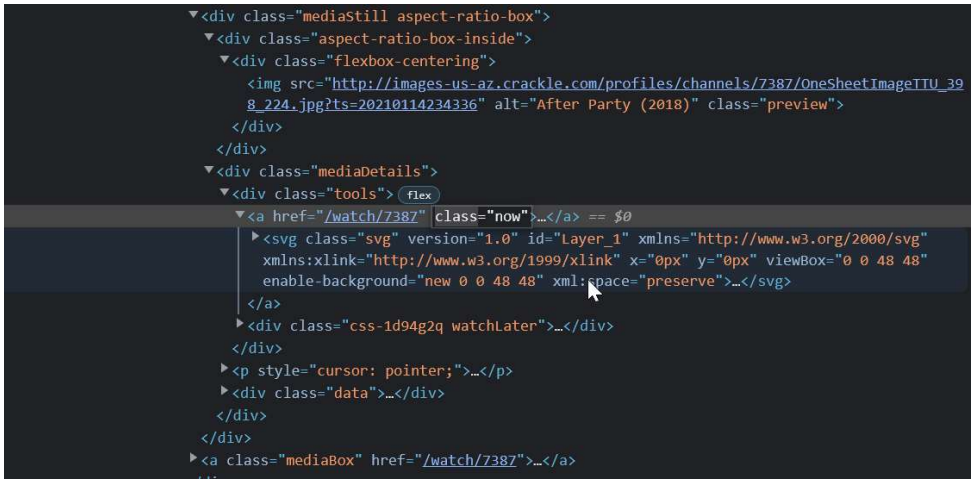


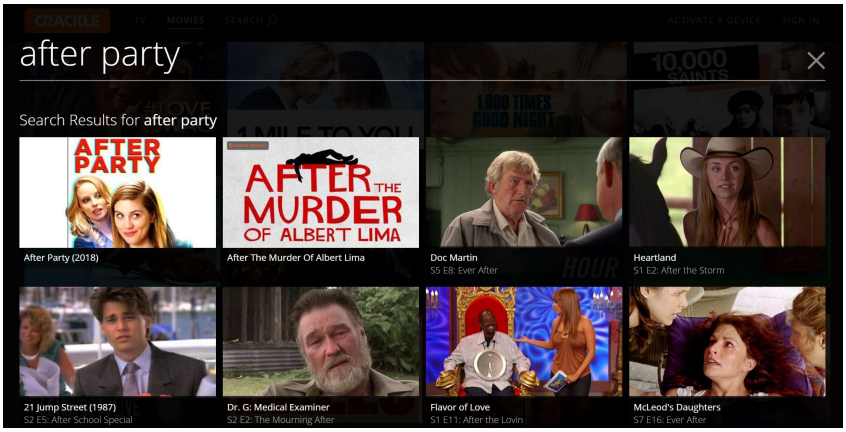
See, e.g., TV Show Player page for "Heartland" on Crackle website located at https://www.crackle.com/watch/7387



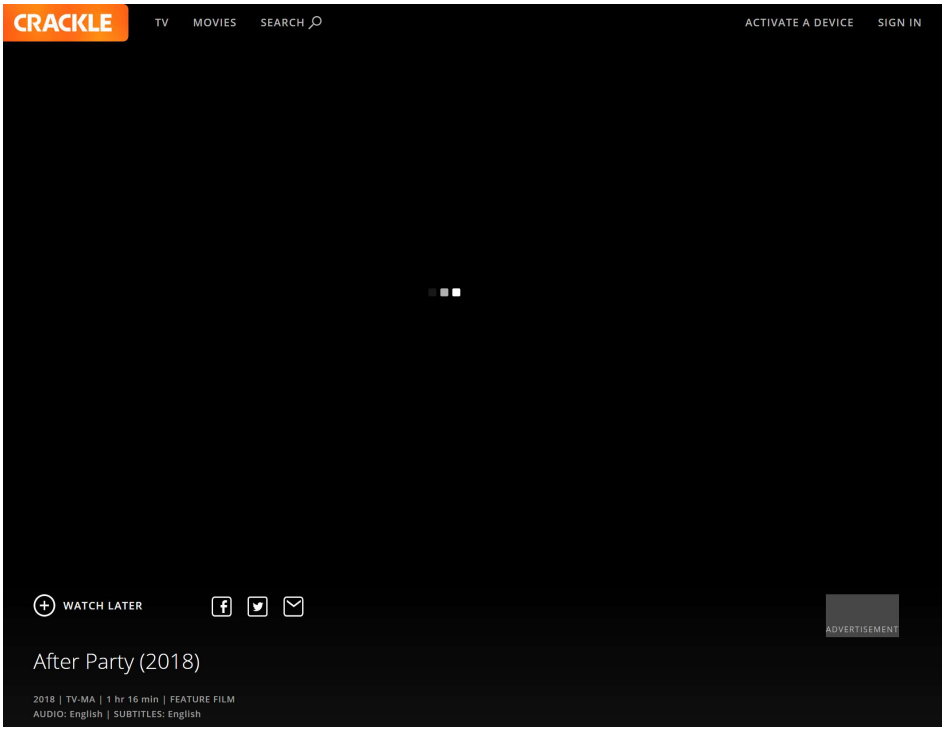
See, e.g., Crackle website located at https://www.crackle.com/

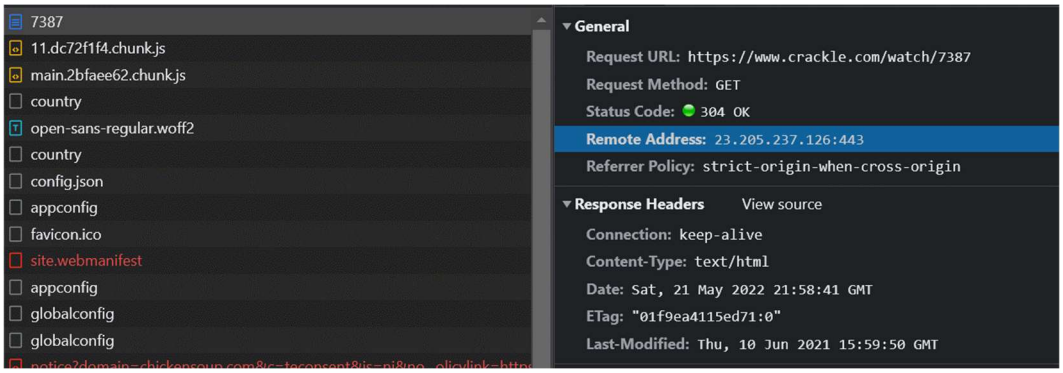






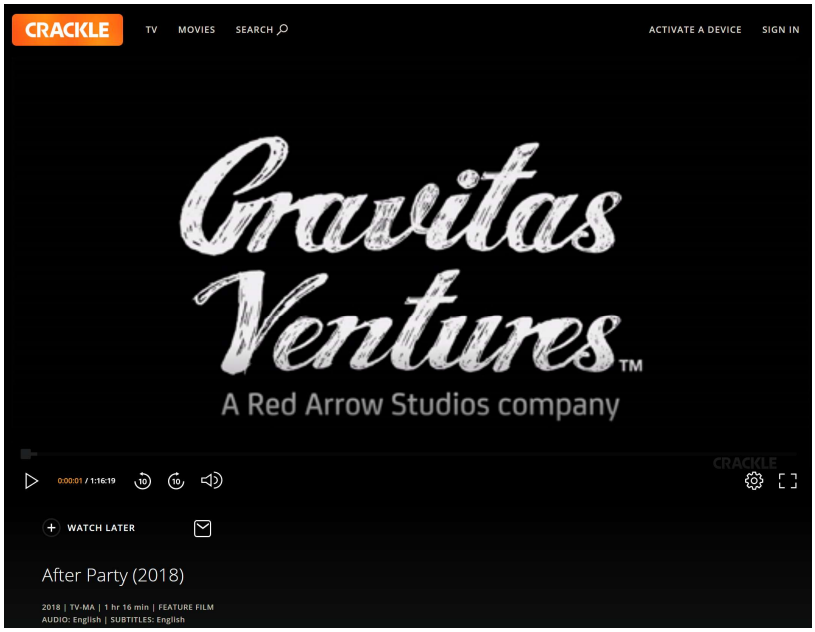
See, e.g., Crackle website located at https://www.crackle.com/movies

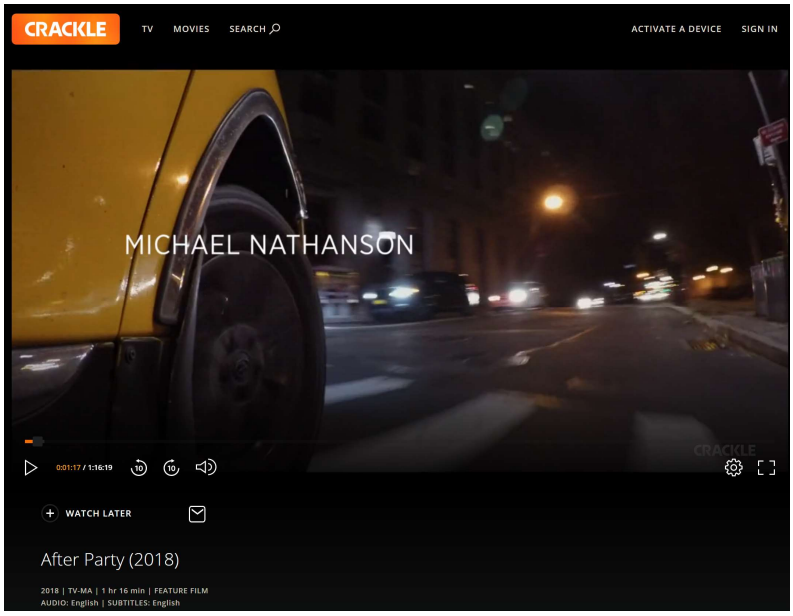


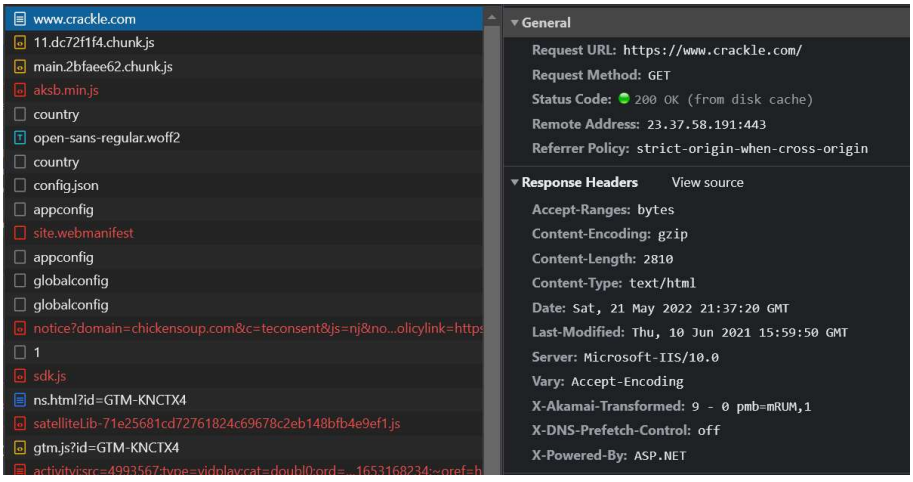


See, e.g., Movie Player page for "After Party" on Crackle website located at https://www.crackle.com/watch/7387

See, e.g., Crackle website located at https://www.crackle.com/


CRACKLE
TV
MOVIES
SEARCH
ACTIVATE A DEVICE
SIGN IN
Gravitas Ventures™
A Red Arrow Studios company
WATCH LATER
After Party (2018)
2018 | TV-MA | 1 hr 16 min | FEATURE FILM
AUDIO: English | SUBTITLES: English


CRACKLE
TV
MOVIES
SEARCH
ACTIVATE A DEVICE
SIGN IN
MICHAEL NATHANSON
WATCH LATER
After Party (2018)
2018 | TV-MA | 1 hr 16 min | FEATURE FILM
AUDIO: English | SUBTITLES: English


www.crackle.com
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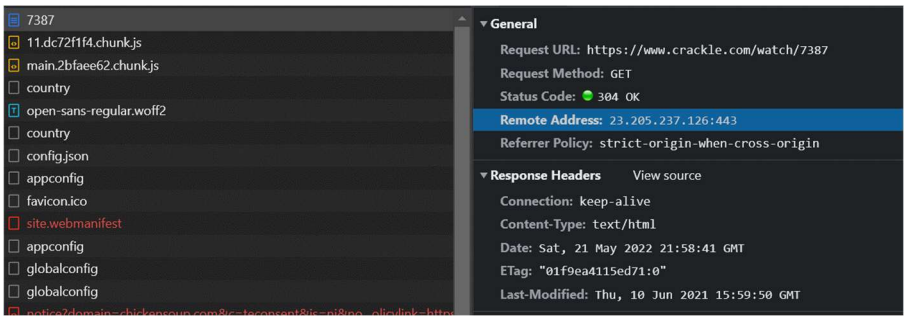
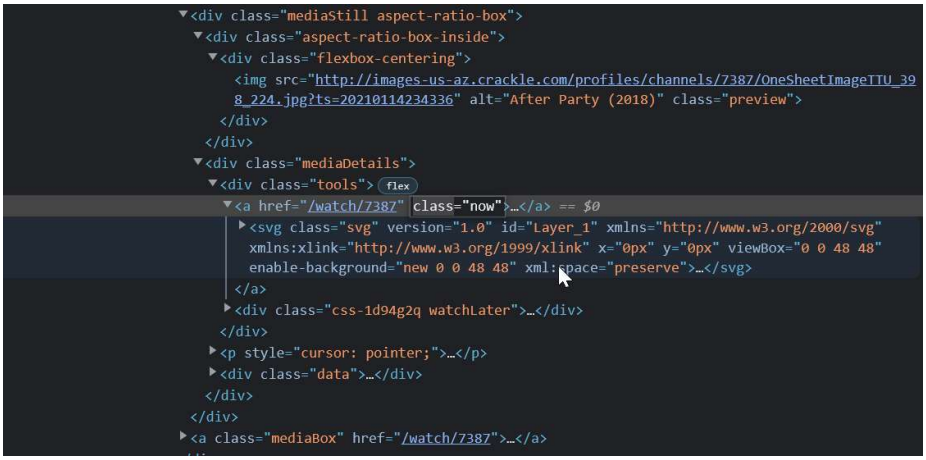
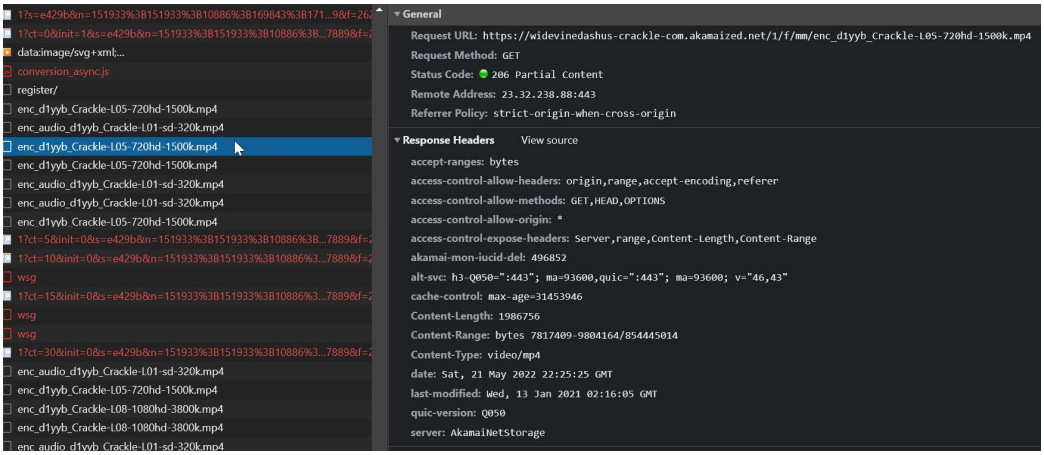
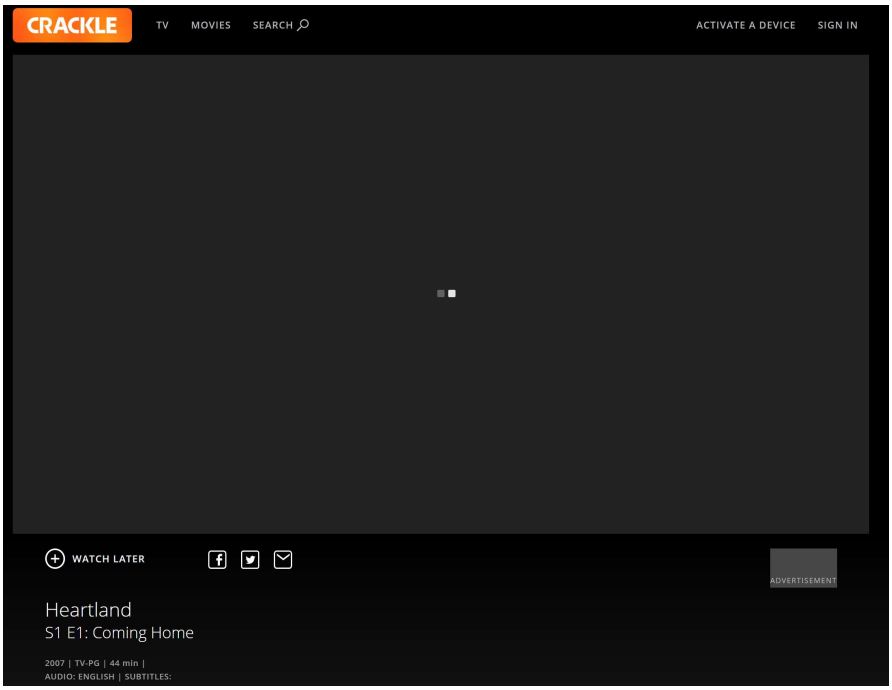
main.2bfaee62.chunk.js
aksb.min.js
country
open-sans-regular.woff2
country
config.json
appconfig
site.webmanifest
appconfig
globalconfig
globalconfig
notice?domain=chickensoup.com&c=teconsent&js=nj&no...olicylink=https
1
sdk.js
ns.html?id=GTM-KNCTX4
satelliteLib-71e25681cd72761824c69678c2eb148bfb4e9ef1.js
gtm.js?id=GTM-KNCTX4
General
Request URL: https://www.crackle.com/
Request Method: GET
Status Code: 200 OK (from disk cache)
Remote Address: 23.37.58.191:443
Referrer Policy: strict-origin-when-cross-origin
Response Headers
View source
Accept-Ranges: bytes
Content-Encoding: gzip
Content-Length: 2810
Content-Type: text/html
Date: Sat, 21 May 2022 21:37:20 GMT
Last-Modified: Thu, 10 Jun 2021 15:59:50 GMT
Server: Microsoft-IIS/10.0
Vary: Accept-Encoding
X-Akamai-Transformed: 9 - 0 pmb=mRUM,1
X-DNS-Prefetch-Control: off
X-Powered-By: ASP.NET







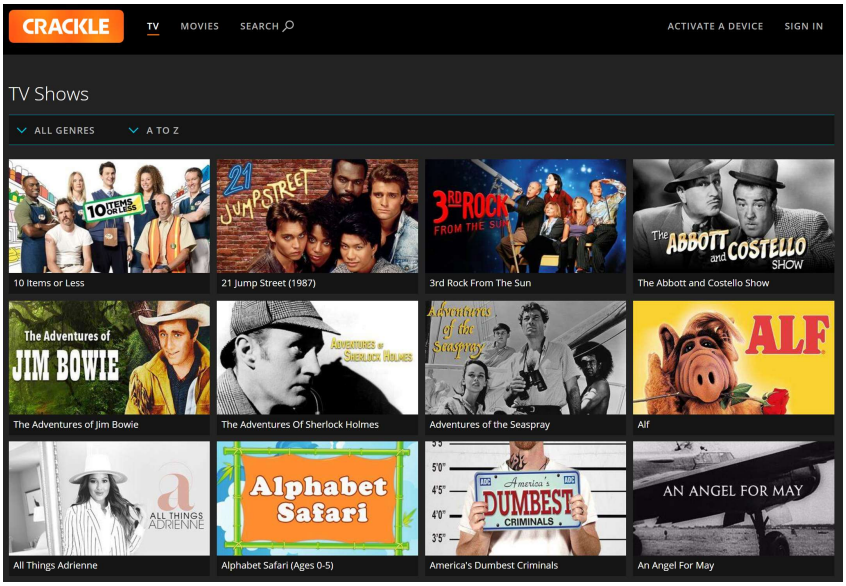
See, e.g., Movie Player page for "After Party" on Crackle website located at https://www.crackle.com/watch/7387



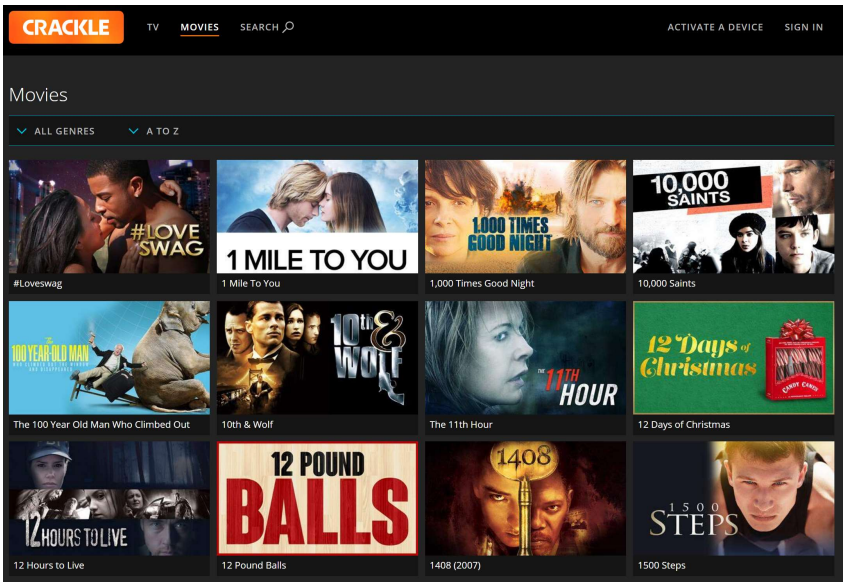
See, e.g., TV Show Player page for "Heartland" on Crackle website located at https://www.crackle.com/watch/7387

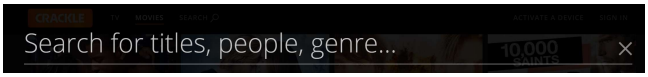
See, e.g., TV Show Information page for "Heartland" on Crackle website located at https://www.crackle.com/watch/7694/2516984

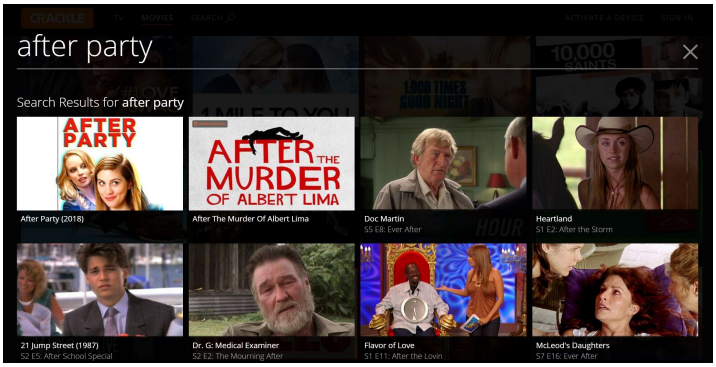
128. The Crackle Application system comprises instructions for receiving a request from a client for specified content. For example, the Crackle Application provides the user's device with code which permits the user's browser to, *inter alia*, display the Crackle website, browse the content available for streaming, and select specific content to view, wherein Crackle's servers receive and interpret code from the user's device indicating the content the user has chosen to view:

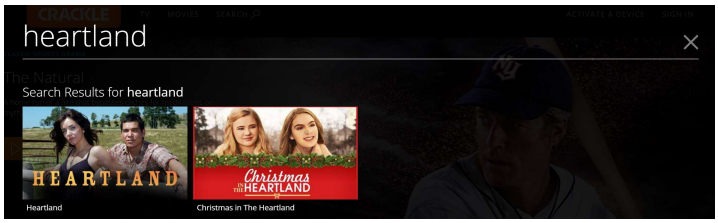


See, e.g., Crackle website located at https://www.crackle.com/shows

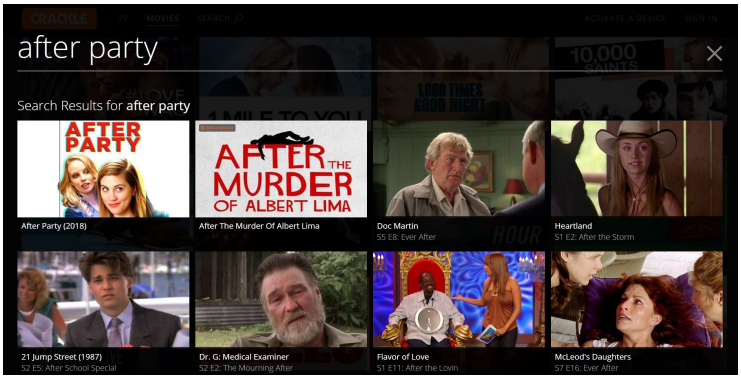


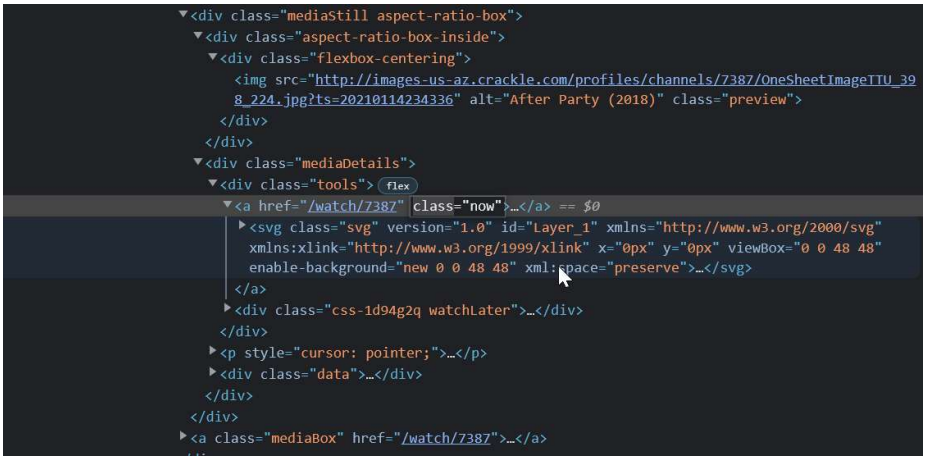




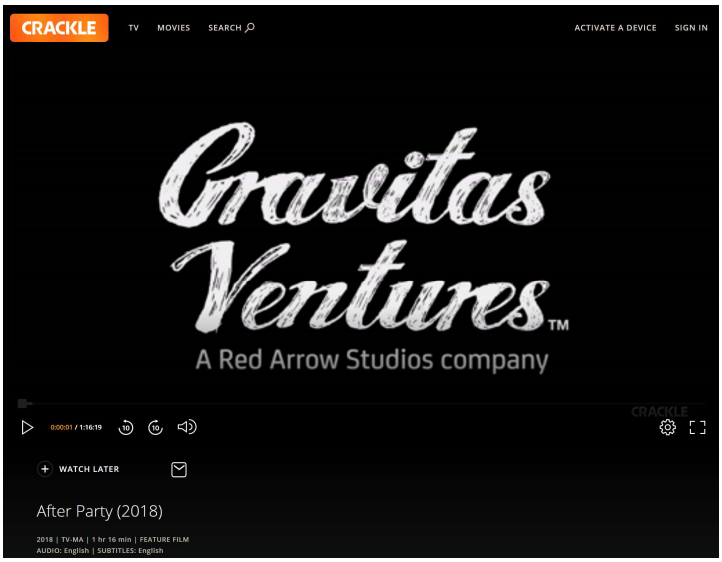


See, e.g., Crackle website located at https://www.crackle.com/

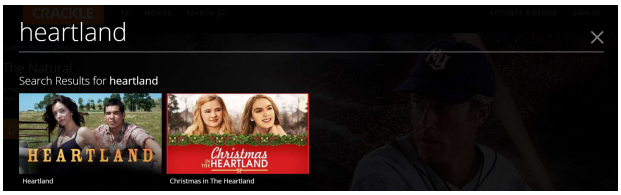


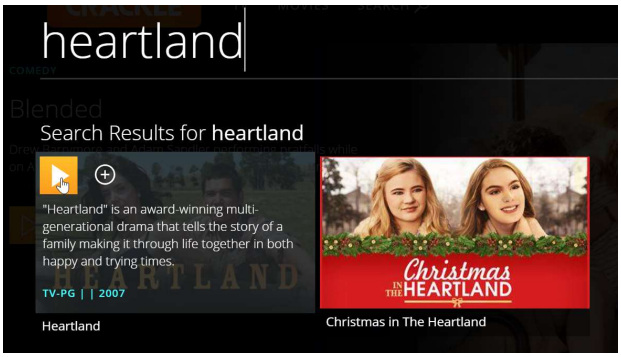


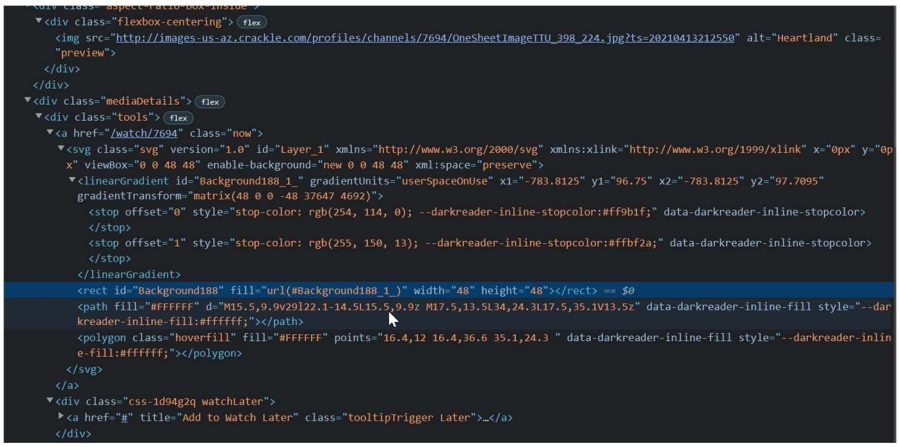
See, e.g., Crackle website located at https://www.crackle.com/



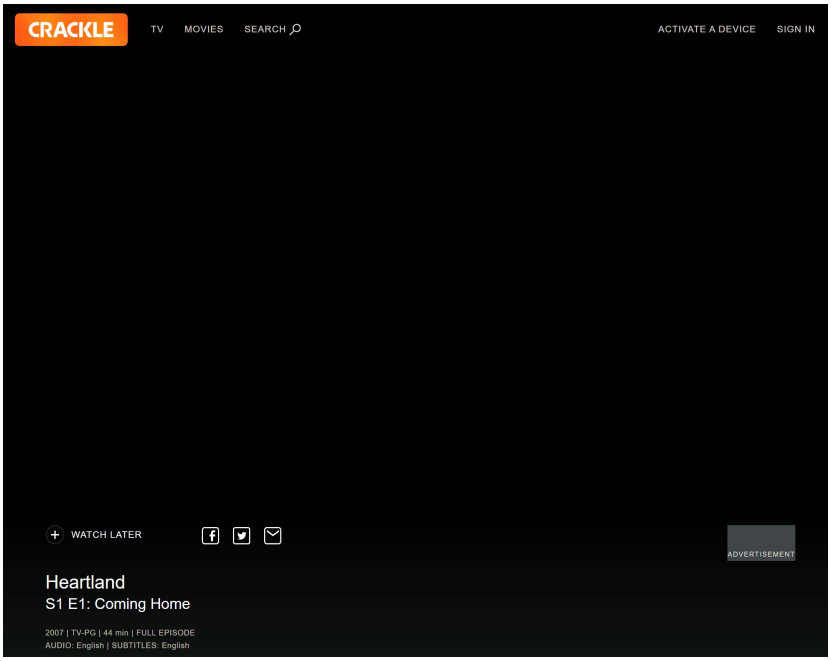
See, e.g., Movie Player page for "After Party" on Crackle website located at https://www.crackle.com/watch/7387





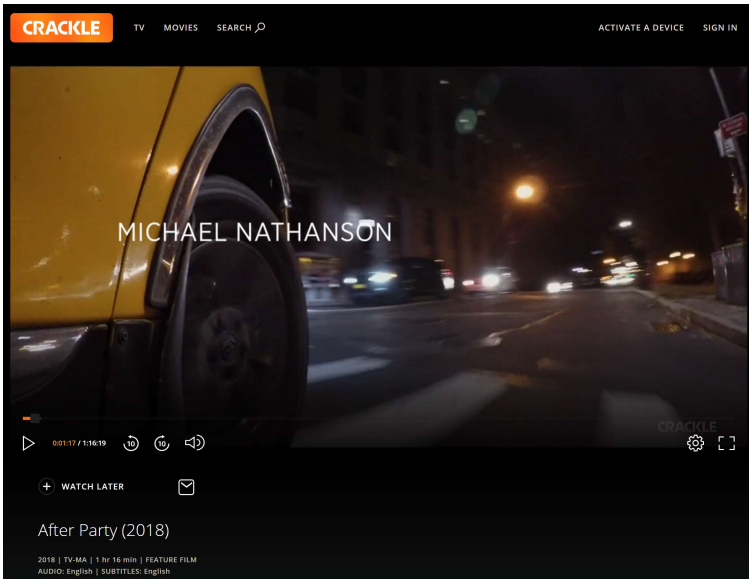


See, e.g., Crackle website located at https://www.crackle.com/

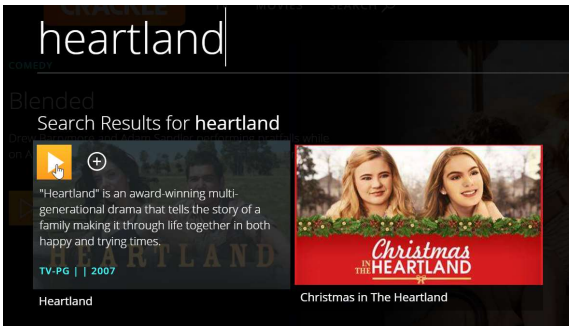


See, e.g., TV Show Information page for "Heartland" on Crackle website located at https://www.crackle.com/watch/7694

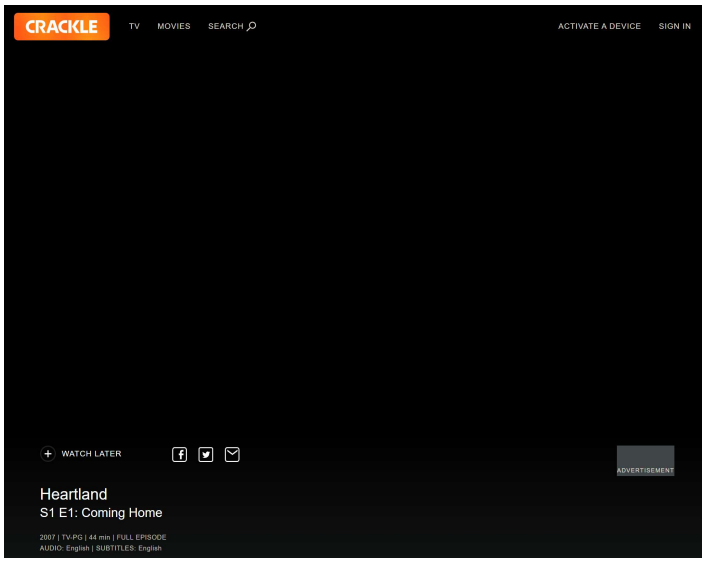
See, e.g., Crackle website located at https://www.crackle.com/



See, e.g., Movie Player page for "After Party" on Crackle website located at https://www.crackle.com/watch/7387



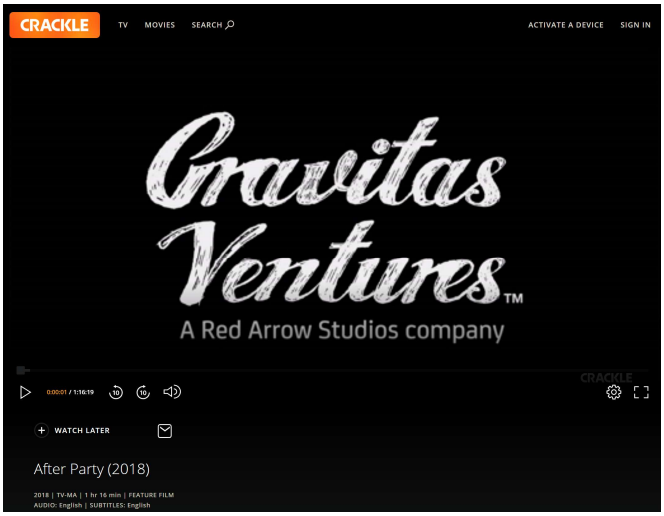
See, e.g., Crackle website located at https://www.crackle.com/

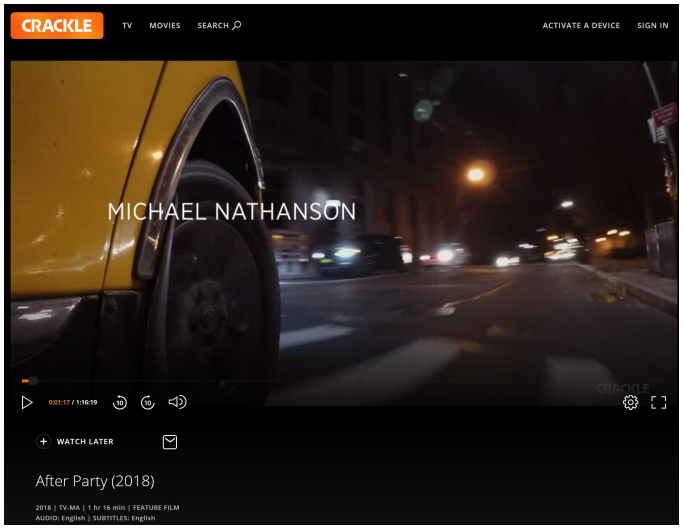


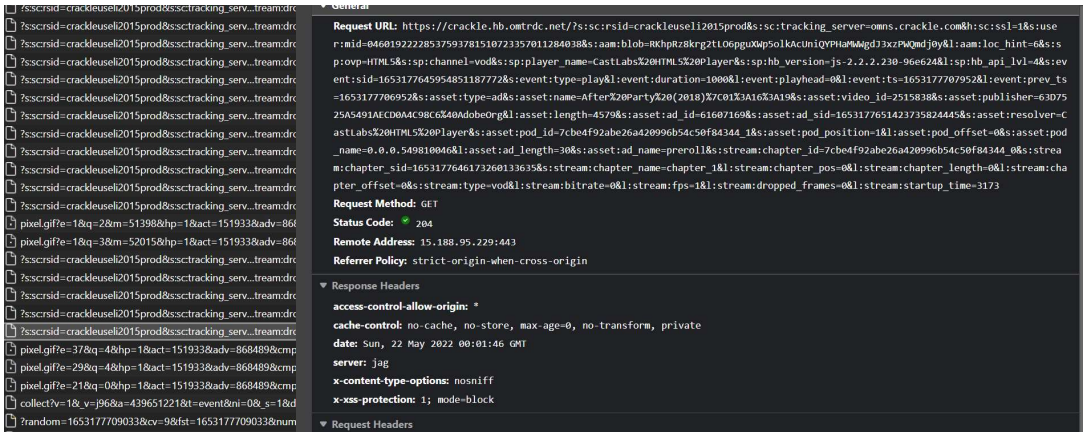
See, e.g., TV Show Information page for "Heartland" on Crackle website located at https://www.crackle.com/watch/7694

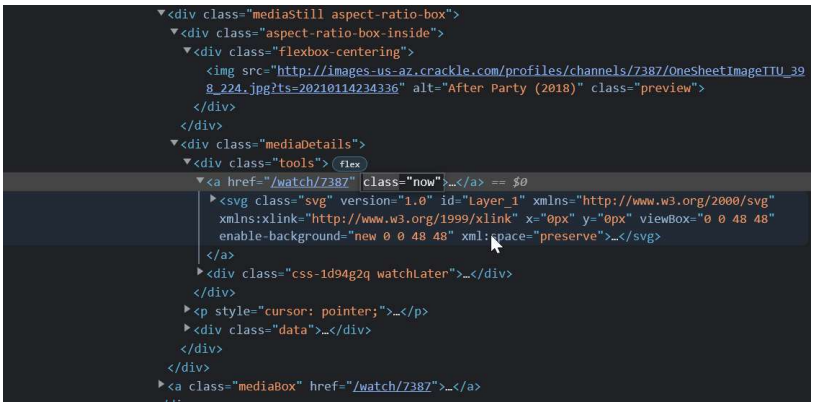
129. The Crackle Application system comprises instructions for communicating to the client the identity of a node server having the specified content stored thereon. For example, the Crackle Application determines whether a third-party server contains the user's chosen content and transmits the identity, *e.g.*, IP address, of the server to the user's device:

See, e.g., Crackle website located at https://www.crackle.com/



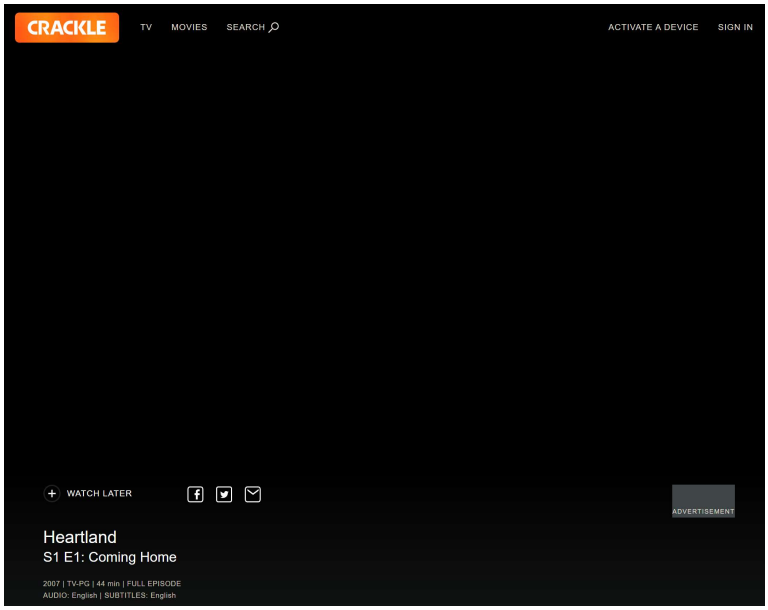




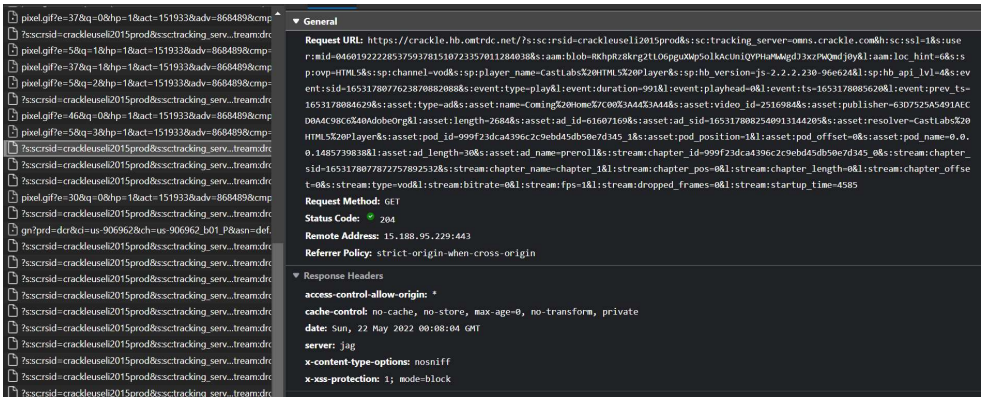


See, e.g., Movie Player page for "After Party" on Crackle website located at https://www.crackle.com/watch/7387

See, e.g., Crackle website located at https://www.crackle.com/



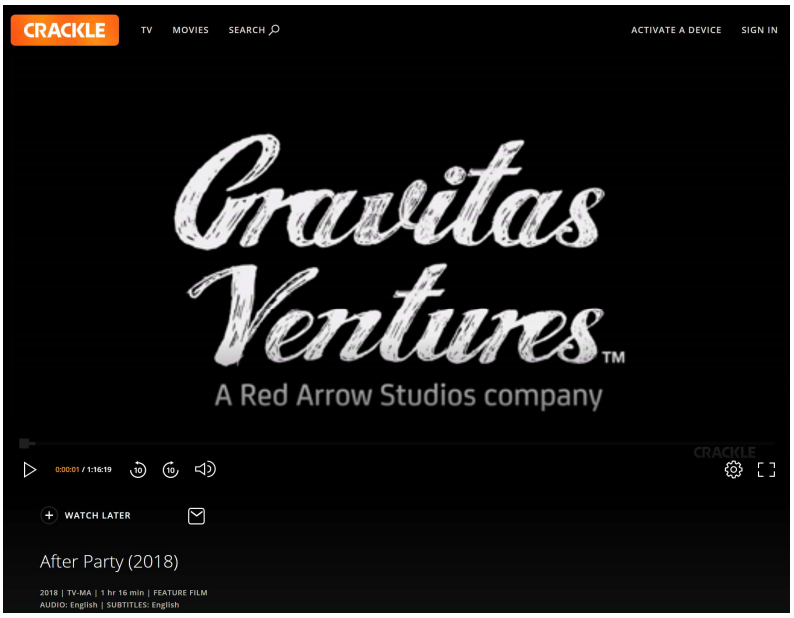
See, e.g., TV Show Information page for "Heartland" on Crackle website located at https://www.crackle.com/watch/7694



See, e.g., Movie Player page for "Heartland" on Crackle website located at https://www.crackle.com/watch/7694

130. The Crackle Application system enables the client to request transmission of the specified content from the node server. For example, the Crackle Application instructs and/or controls the user's browser on the user's device running code to connect to the identified third-party server, including via the server's IP address, where the user's device then requests the chosen content be transmitted:

See, e.g., Movie Information page for "After Party" on Crackle website located at https://popcornflix.com/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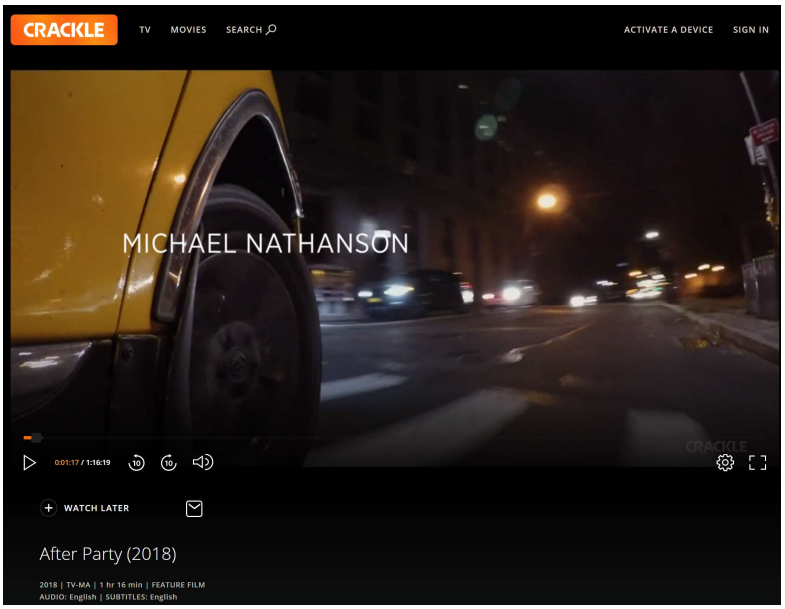
2018 | TV-MA | 1 hr 16 min | FEATURE FILM
AUDIO: English | SUBTITLES: English


CRACKLE
TV
MOVIES
SEARCH
ACTIVATE A DEVICE
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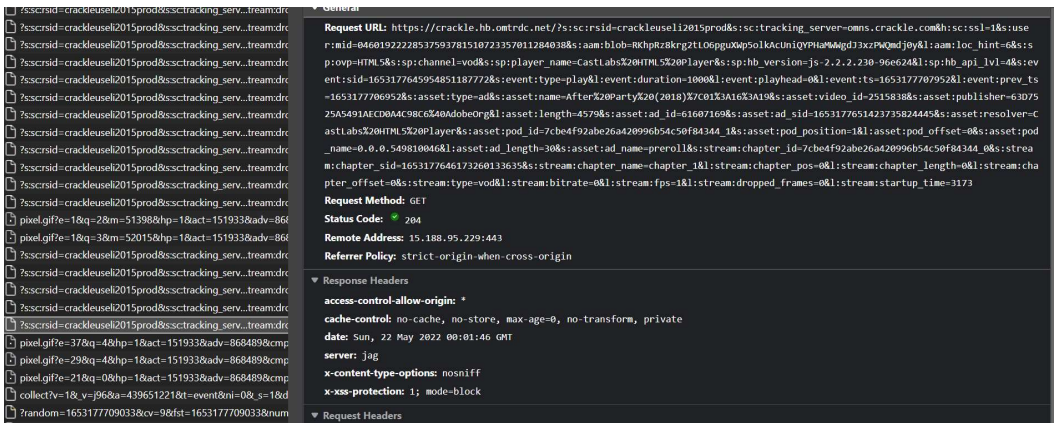
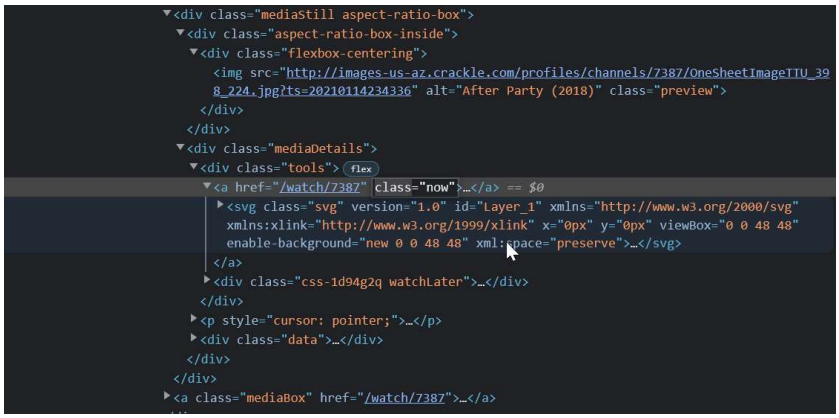
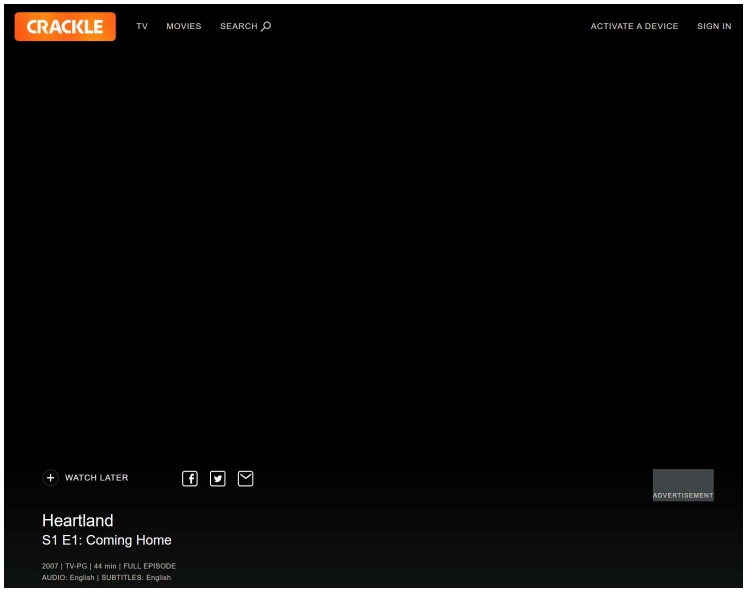
WATCH LATER
After Party (2018)
2018 | TV-MA | 1 hr 16 min | FEATURE FILM
AUDIO: English | SUBTITLES: English

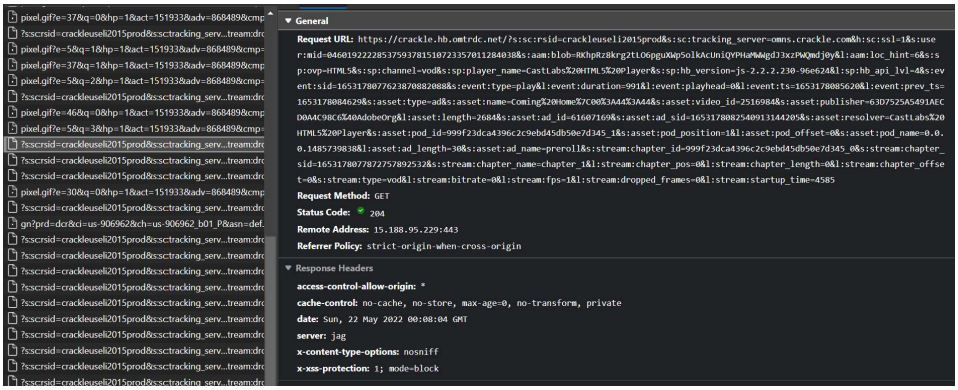

Request URL: https://crackle.hb.omtrdc.net/?s:sc:rsid=crackleuseli2015prod&s:sc:tracking_server=omns.crackle.com&h:sc:ssl=1&s:user:mid=04601922228537593781510723357011284038&s:aam:blob=RKhpRz8krg2tLO6pguXWp5olkAcUniQYPHaMWWgdJ3xzPWQmdj0y&l:aam:loc_hint=6&s:sp:ovp=HTML5&s:sp:channel=vod&s:sp:player_name=CastLabs%20HTML5%20Player&s:sp:hb_version=js-2.2.2.230-96e624&l:sp:hb_api_lvl=4&s:event:sid=1653177645954851187772&s:event:type=play&l:event:duration=1000&l:event:playhead=0&l:event:ts=1653177707952&l:event:prev_ts=1653177706952&s:asset:type=ad&s:asset:name=After%20Party%20(2018)%7C01%3A16%3A19&s:asset:video_id=2515838&s:asset:publisher=63D7525A5491AECD0A4C98C6%40AdobeOrg&l:asset:length=4579&s:asset:ad_id=61607169&s:asset:ad_sid=1653177651423735824445&s:asset:resolver=CastLabs%20HTML5%20Player&s:asset:pod_id=7cbe4f92abe26a420096b54c50f84344_1&s:asset:pod_position=1&l:asset:pod_offset=0&s:asset:pod_name=0.0.0.54981004&l:asset:ad_length=30&s:asset:ad_name=preroll&s:stream:chapter_id=7cbe4f92abe26a420096b54c50f84344_0&s:stream:chapter_sid=1653177646173260133635&s:stream:chapter_name=chapter_1&l:stream:chapter_pos=0&l:stream:chapter_length=0&l:stream:chapter_offset=0&s:stream:type=vod&l:stream:bitrate=0&l:stream:fps=1&l:stream:dropped_frames=0&l:stream:startup_time=3173
Request Method: GET
Status Code: 204
Remote Address: 15.188.95.229:443
Referrer Policy: strict-origin-when-cross-origin
Response Headers
access-control-allow-origin: *
cache-control: no-cache, no-store, max-age=0, no-transform, private
date: Sun, 22 May 2022 00:01:46 GMT
server: jag
x-content-type-options: nosniff
x-xss-protection: 1; mode=block
Request Headers



See, e.g., Movie Player page for "After Party" on Crackle website located at https://www.crackle.com/watch/7387

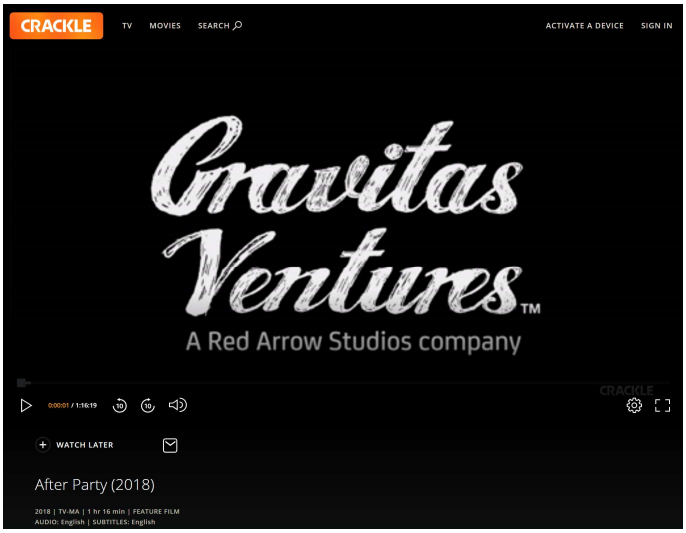


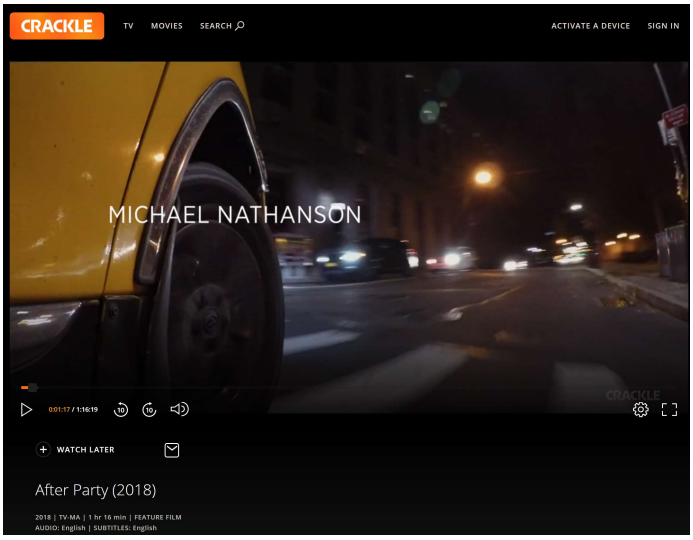
See, e.g., TV Show Information page for "Heartland" on Crackle website located at https://www.crackle.com/watch/7694

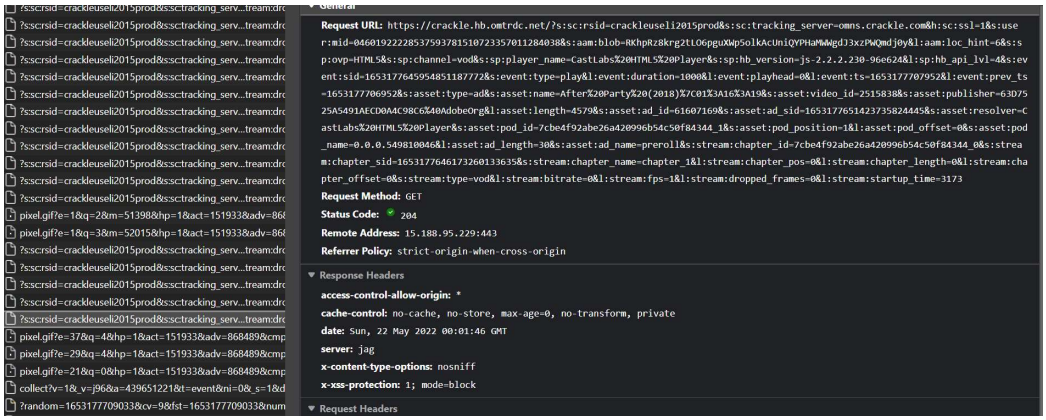


See, e.g., Movie Player page for "Heartland" on Crackle website located at https://www.crackle.com/watch/7694

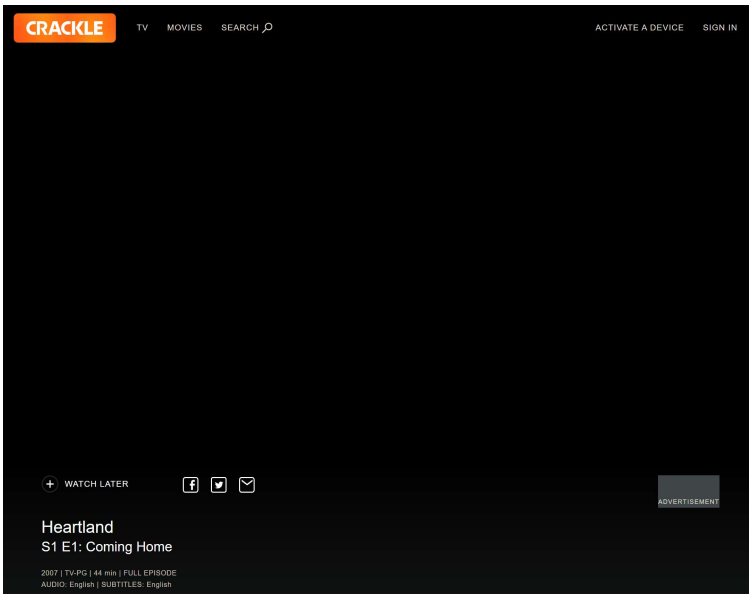
131. The Crackle Application system comprises instructions for ascertaining that the node server transmitted the specified content to the client. For example, the Crackle Application receives updates from the user's device and/or the third-party server indicating that all, or a part, of the content has been transferred to the user's device, which may occur in smaller pieces or "chunks," and the Crackle Application updates the Crackle webpage for the user to indicate that at least a portion of the content has already been viewed:



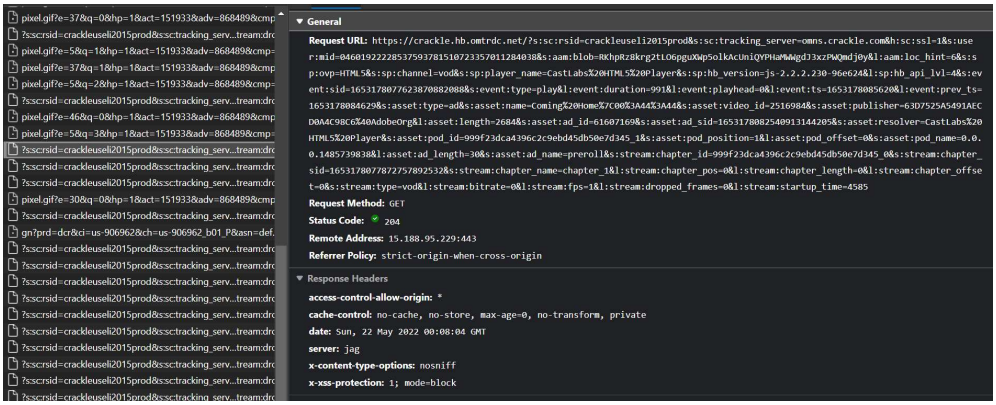


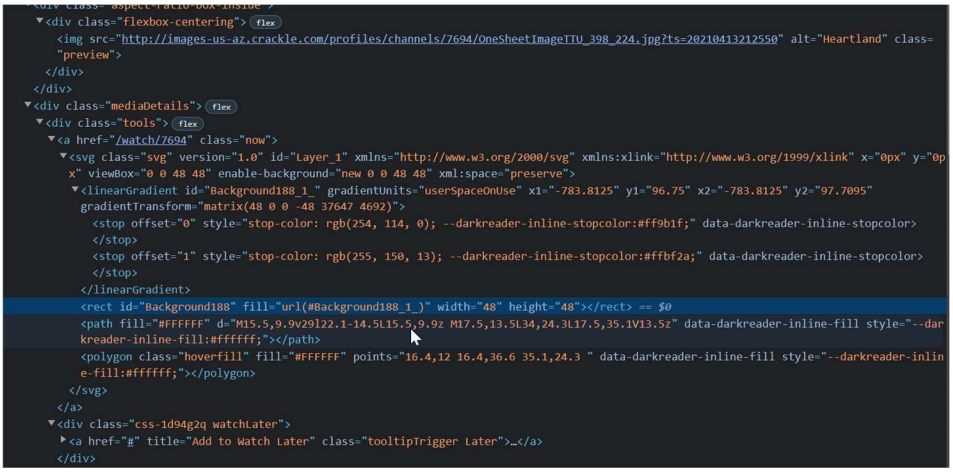


See, e.g., Movie Player page for "After Party" on Crackle website located at https://www.crackle.com/watch/7387

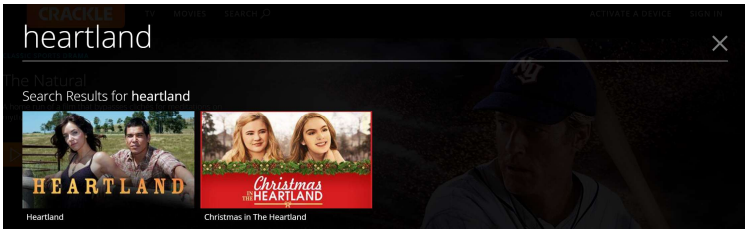


See, e.g., TV Show Information page for "Heartland" on Crackle website located at https://www.crackle.com/watch/7694

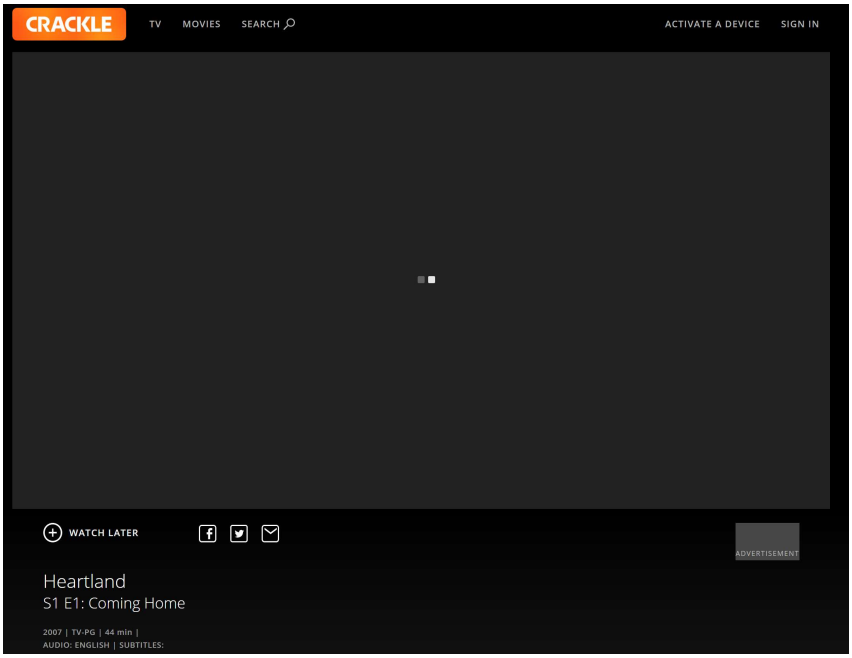




See, e.g., Movie Player page for "Heartland" on Crackle website located at https://www.crackle.com/watch/7694



See, e.g., Crackle website located at https://www.crackle.com/movies



See, e.g., TV Show Player page for "Heartland" on Crackle website located at https://www.crackle.com/watch/7387

See, e.g., TV Show Information page for "Heartland" on Crackle website located at https://www.crackle.com/watch/7694/2516984

132. The Crackle Application system comprises an owner of the node server being offered an incentive as compensation for transmission of the specified content to the client. For example, the use of third-party servers by the Crackle Application for the distribution of content to the user's device necessitates at least payment of monetary compensation for said hosting, including on a transactional basis or lump payment for set data limit basis, or as otherwise stated in the agreement

between Crackle and any third-party whose server is used by the Crackle Application.

133. Crackle has directly infringed, and continues to directly infringe, the claims of the '376 Patent, including at least those noted above, including by making and using the Crackle Application system in violation of 35 U.S.C. § 271(a). Further, including at least to the extent Crackle provides and/or supplies software running on a user's computer, the direct infringement of users that occurs in connection with Crackle's applications and/or web services occurs under the direction or control of Crackle.

134. Crackle has had at least constructive notice of the '376 Patent since at least its issuance. Crackle will have been on actual notice of the '376 Patent since, at the latest, the service of this Complaint. Further, Crackle is being made aware of infringement of the '376 Patent through use of the Crackle Application system at least via the infringement allegations set forth herein. Such direct infringement has been and remains clear, unmistakable, and inexcusable. On information and belief, Crackle knew, or should have known, of the clear, unmistakable, and inexcusable direct infringing conduct at least since receiving notice of the '376 Patent. Thus, on information and belief, Crackle has, at least since receiving notice of the '376 Patent, specifically intended to directly infringe.

135. QTI believes and contends that, at a minimum, Crackle's knowing and intentional post-suit continuance of its unjustified, clear, and inexcusable infringement of the '376 Patent since receiving notice of its infringement of the '376 Patent, is necessarily willful, wanton, malicious, in bad-faith, deliberate, conscious and wrongful, and it constitutes egregious conduct worthy of a finding of willful infringement. Accordingly, at least since receiving notice of this suit, Crackle has willfully infringed the '376 Patent.

B. Infringement Via PCF Application

136. Crackle has infringed, and is now infringing, the '376 Patent, including at least claims 37

and 57, in this judicial district and elsewhere, in violation of 35 U.S.C. § 271 through actions comprising the practicing, without authority from Plaintiff, systems and methods for obtaining and aggregating contact information from a plurality of messaging services providers via Crackle's PCF Application system, including associated hardware, firmware, and/or software, including as claimed in the '376 asserted claims. On information and belief, Crackle practices the claimed methods and provides the claimed systems with and via its PCF Application system comprising the Popcornflix website at popcornflix.com; the Popcornflix Android mobile application; the Popcornflix iOS mobile application; the Popcornflix smart device application; the Popcornflix console application; the PopcornflixGold mobile application; the Popcornflix Comedy Roku application; the Popcornflix Kids Roku application; and/or the Popcornflix streaming device application, including the FrightPix Amazon application, which, upon information and belief, has been incorporated into, and/or replaced by, the PCF Application.

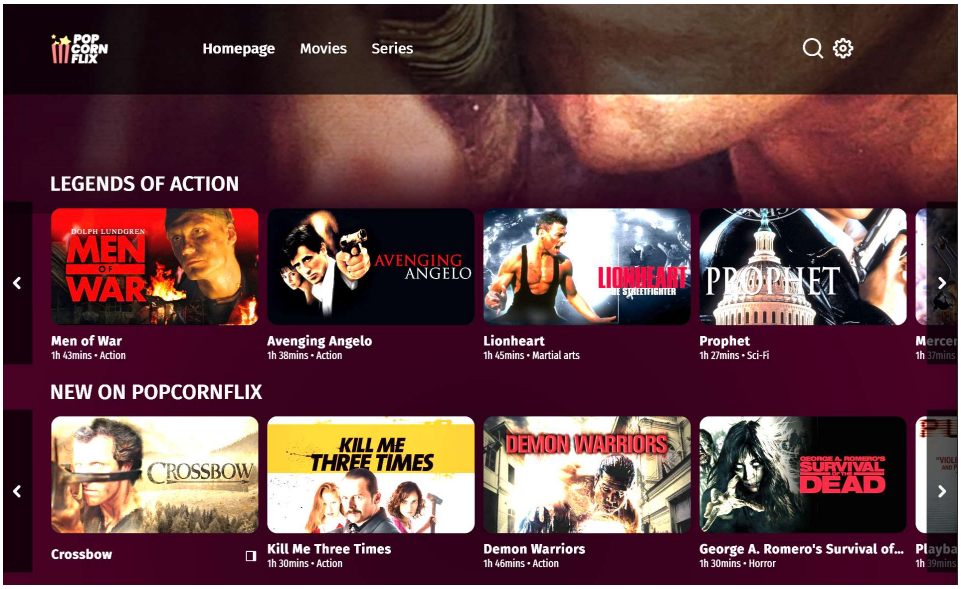
137. Without limitation, the accused system comprising the PCF Application system that comprises a computer readable medium or media encoded with one or more computer programs including instructions for effecting the provision of content over a network, comprising: instructions for receiving a request from a client for specified content; instructions for communicating to the client the identity of a node server having the specified content stored thereon, thereby enabling the client to request transmission of the specified content from the node server; and instructions for ascertaining that the node server transmitted the specified content to the client, wherein an owner of the node server is offered an incentive as compensation for transmission of the specified content to the client.

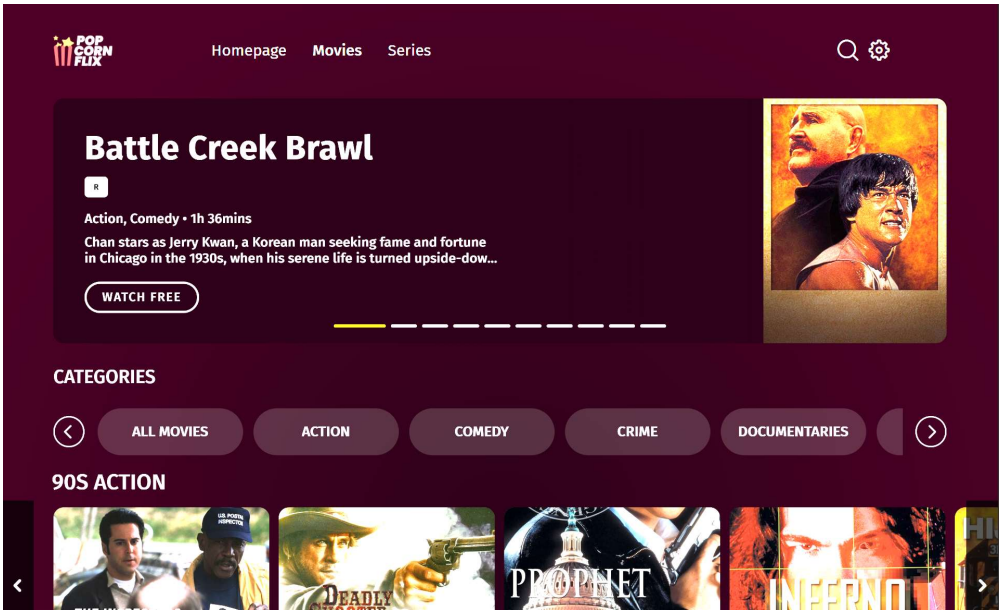
138. Without limitation, and for example, the accused instrumentality comprising the PCF Application system practices said methods to effect the provision of content over a network, comprising the steps of: identifying at a core server a network site that will act as a node server for

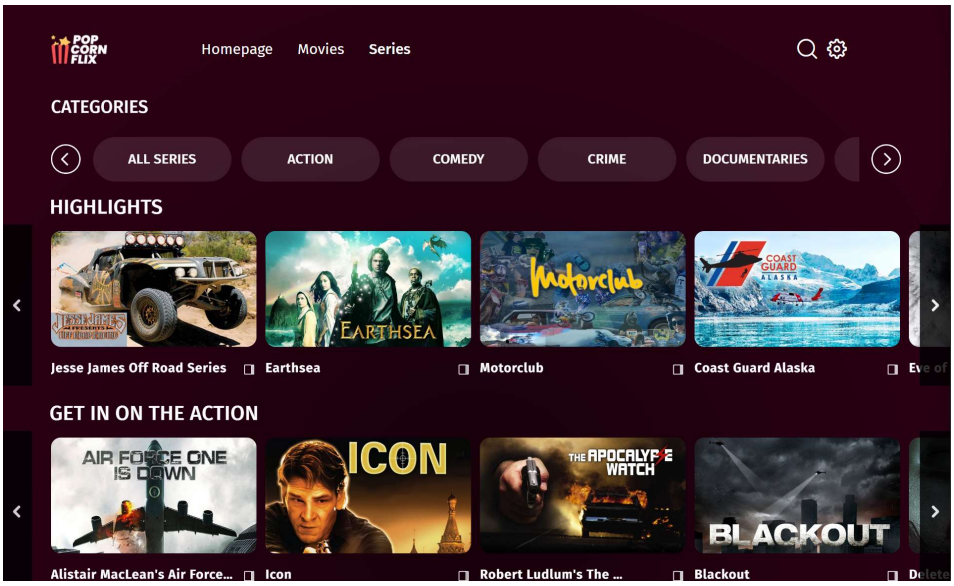
distribution of specified content; providing from the core server the specified content to the node server; receiving at the core server a request from a client for the specified content; communicating from the core server the identity of the node server to the client to enable the client to request transmission of the specified content from the node server; and ascertaining at the core server that the node server transmitted the specified content to the client, wherein an owner of the node server is offered an incentive as compensation for transmission of the specified content to the client.

139. Further, the PCF Application system comprises computer readable storage media and methods which permit Crackle's server to identify a remote server to which the PCF Application system provides specified content such that a client may request specified content from Crackle's server, which directs the client to the node server containing the specified content so that the client may obtain the specified content from the node server, wherein Crackle's server is notified by the node server that the content has been transferred and the owner of the node server is offered an incentive as compensation for the transmission thereof.

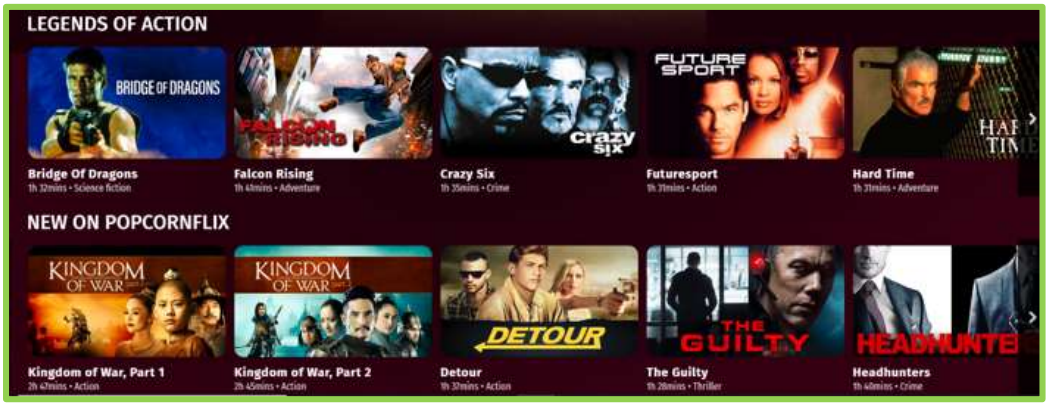
140. For example, the PCF Application system permits the streaming of media content over a network from third-party servers to a user's device, wherein said streaming occurs, *inter alia*, via Crackle's servers providing the identity of a third-party server to the user's device, in response to the user's request to view media content provided by Crackle, wherein the server identified is one which contains the content requested:

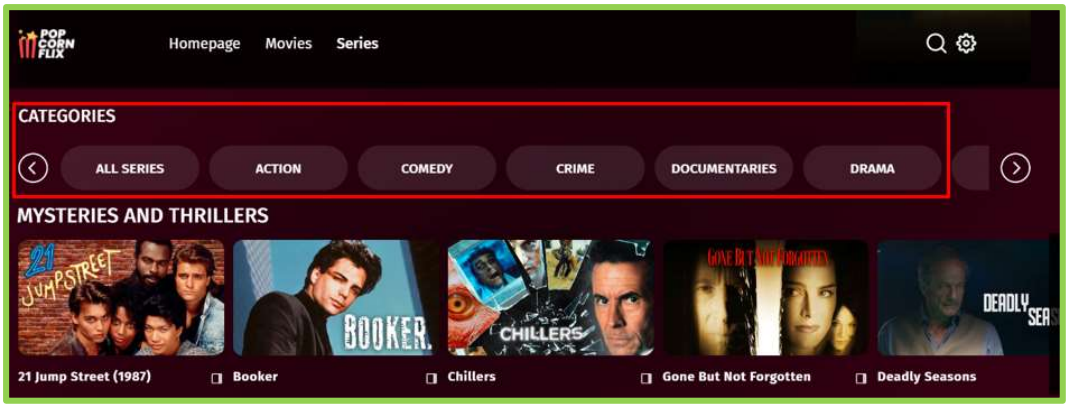

POP CORN FLIX
Homepage
Movies
Series
LEGENDS OF ACTION
Men of War
1h 43mins • Action
Avenging Angelo
1h 38mins • Action
Lionheart
1h 45mins • Martial arts
Prophet
1h 27mins • Sci-Fi
NEW ON POPCORNFLIX
Crossbow
Kill Me Three Times
1h 30mins • Action
Demon Warriors
1h 46mins • Action
George A. Romero's Survival of...
1h 30mins • Horror


POP CORN FLIX
Homepage
Movies
Series
Battle Creek Brawl
R
Action, Comedy • 1h 36mins
Chan stars as Jerry Kwan, a Korean man seeking fame and fortune in Chicago in the 1930s, when his serene life is turned upside-dow...
WATCH FREE
CATEGORIES
ALL MOVIES
ACTION
COMEDY
CRIME
DOCUMENTARIES
90S ACTION

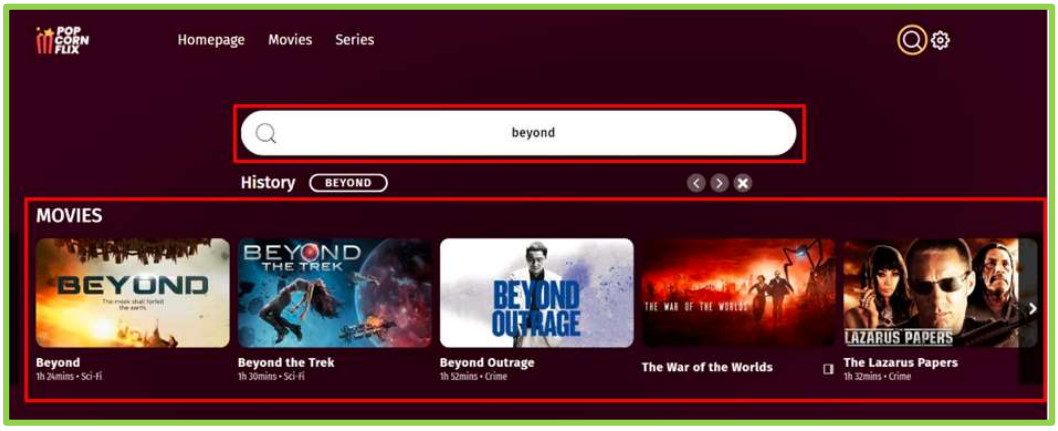

POP CORN FLIX
Homepage
Movies
Series
CATEGORIES
ALL SERIES
ACTION
COMEDY
CRIME
DOCUMENTARIES
HIGHLIGHTS
Jesse James Off Road Series
Earthsea
Motorclub
Coast Guard Alaska
GET IN ON THE ACTION
AIR FORCE ONE IS DOWN
ICON
THE APOCALYPSE WATCH
BLACKOUT
Alistair MacLean's Air Force...
Icon
Robert Ludlum's The ...
Blackout

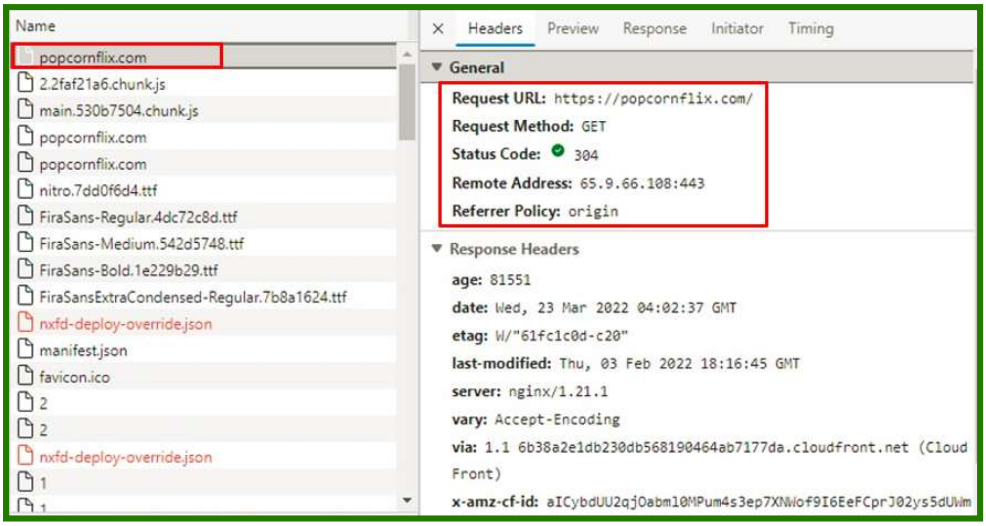
POP CORN FLIX
Homepage
Movies
Series
Hard Time
TV-PG
Adventure, Crime, Drama, Mystery • 1h 31mins
A cop does time for a crime he did not commit and then comes out of prison to track down the person who set him up.
WATCH FREE

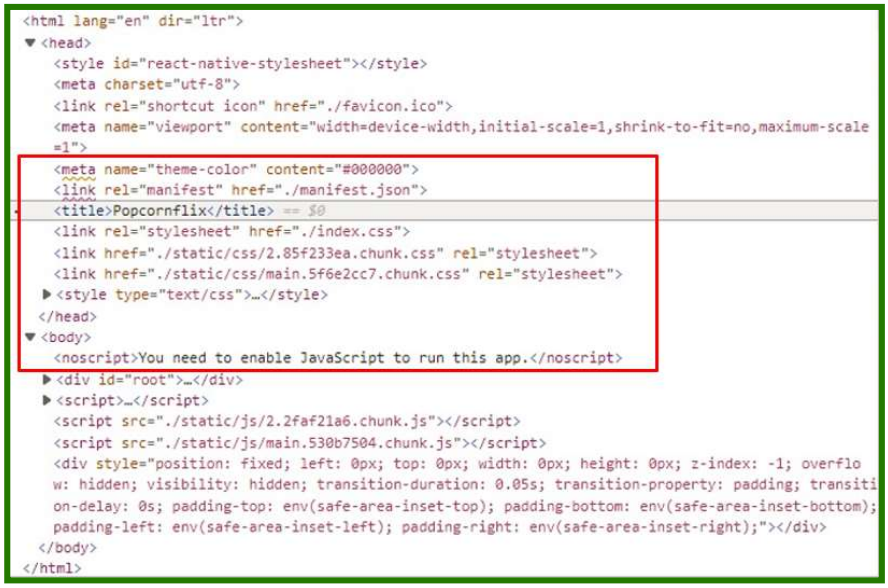

LEGENDS OF ACTION
BRIDGE OF DRAGONS
Bridge Of Dragons
Falcon Rising
Crazy Six
FUTURE SPORT
Futuresport
Hard Time
NEW ON POPCORNFLIX
KINGDOM OF WAR
Kingdom of War, Part 1
Kingdom of War, Part 2
DETOUR
Detour
THE GUILTY
The Guilty
HEADHUNTERS
Headhunters


POP CORN FLIX
Homepage
Movies
Series
CATEGORIES
ALL SERIES
ACTION
COMEDY
CRIME
DOCUMENTARIES
DRAMA
MYSTERIES AND THRILLERS
21 Jump Street (1987)
Booker
Chillers
Gone But Not Forgotten
Deadly Seasons

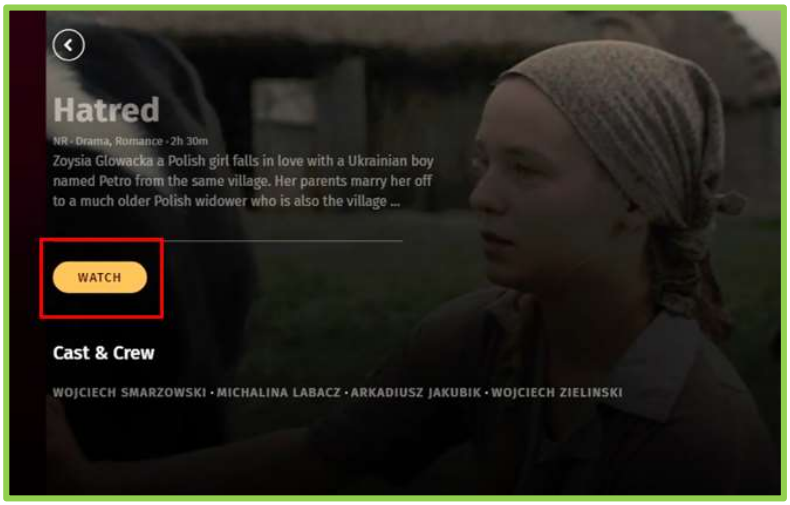
POP CORN FLIX
Homepage
Movies
Series
hatred
MOVIES
Hatred
2h 30mins • Drama

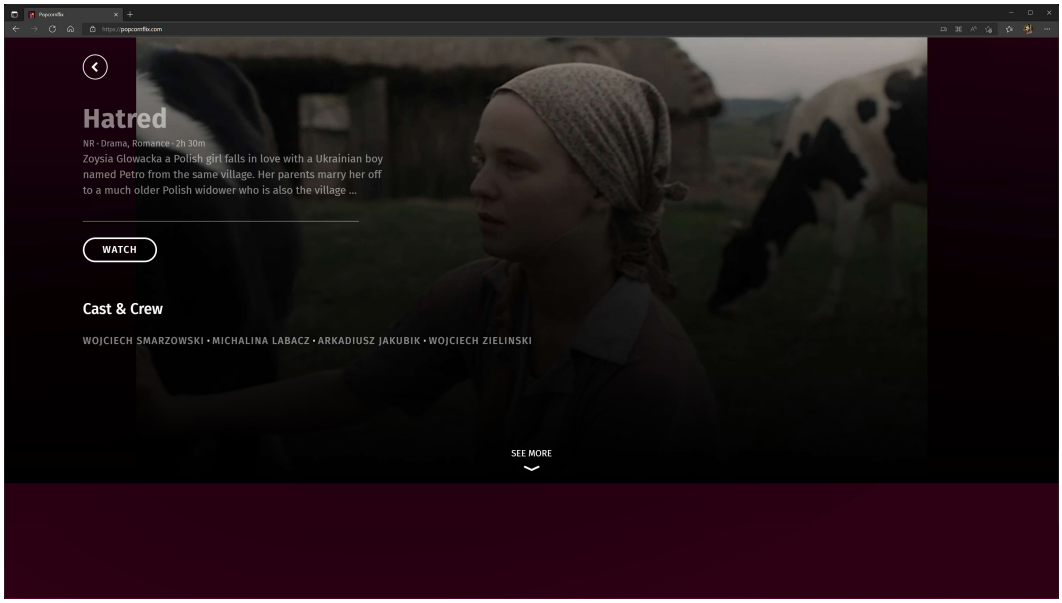

POP CORN FLIX
Homepage
Movies
Series
beyond
History
BEYOND
MOVIES
Beyond
1h 24mins • Sci-Fi
Beyond the Trek
1h 30mins • Sci-Fi
Beyond Outrage
1h 52mins • Crime
The War of the Worlds
The Lazarus Papers
1h 32mins • Crime



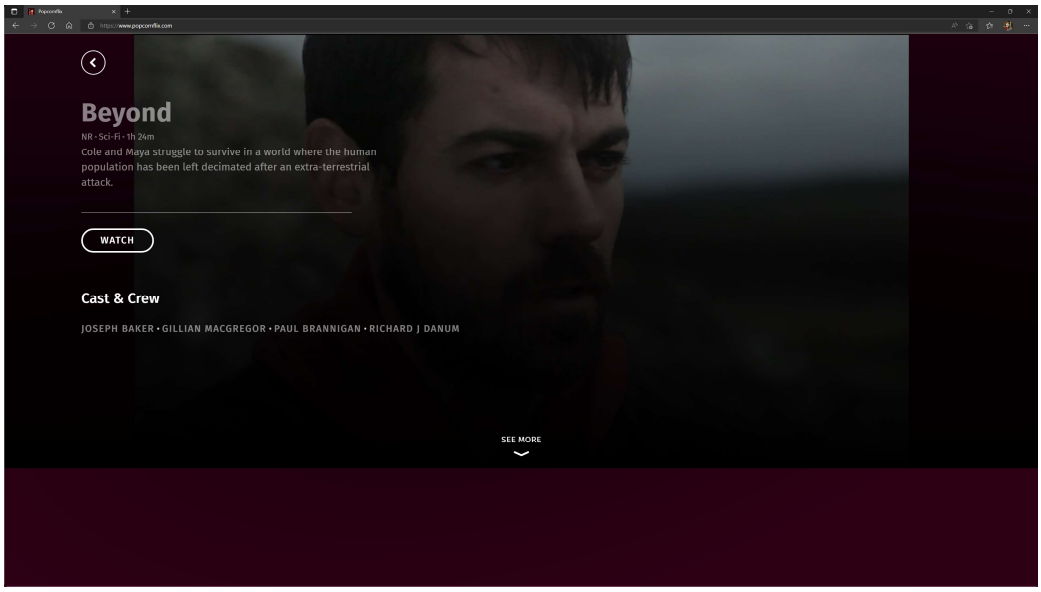


See, e.g., Popcornflix website located at https://popcornflix.com/





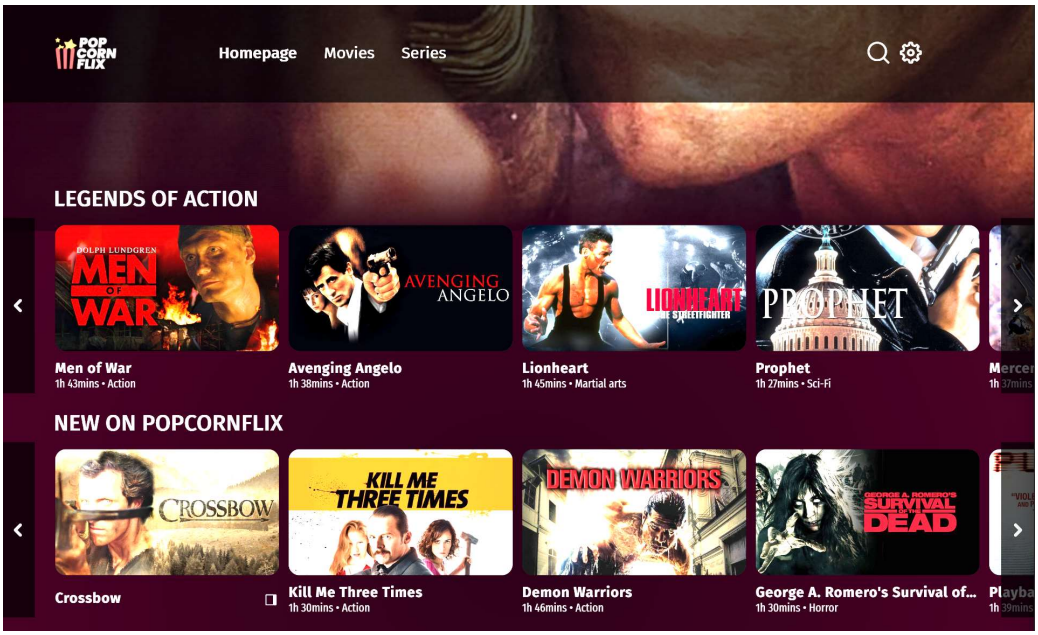
See, e.g., Movie Information page for "Hatred" on Popcornflix website located at https://popcornflix.com/

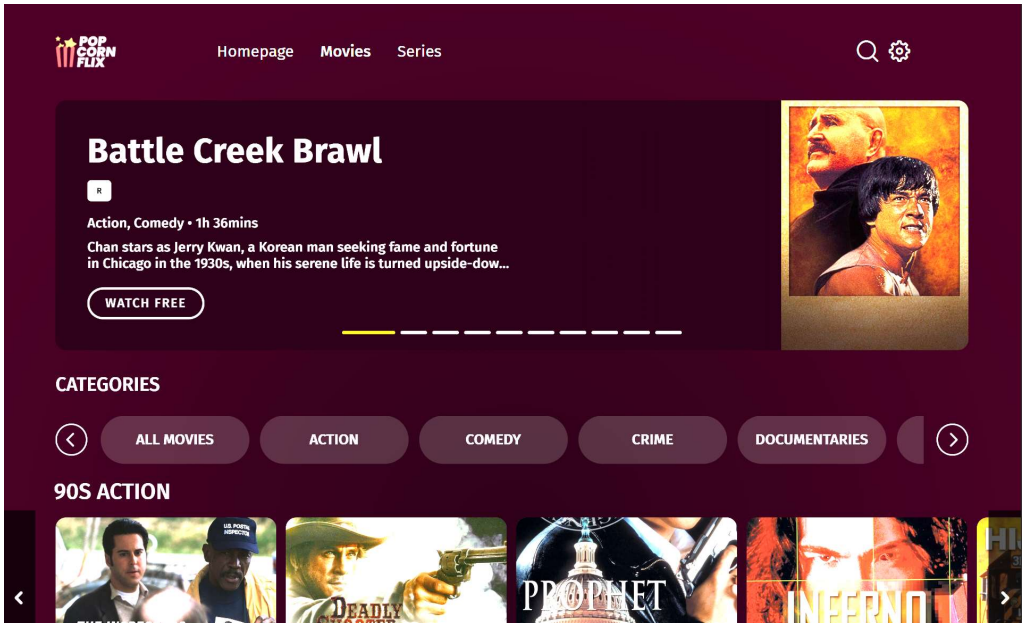


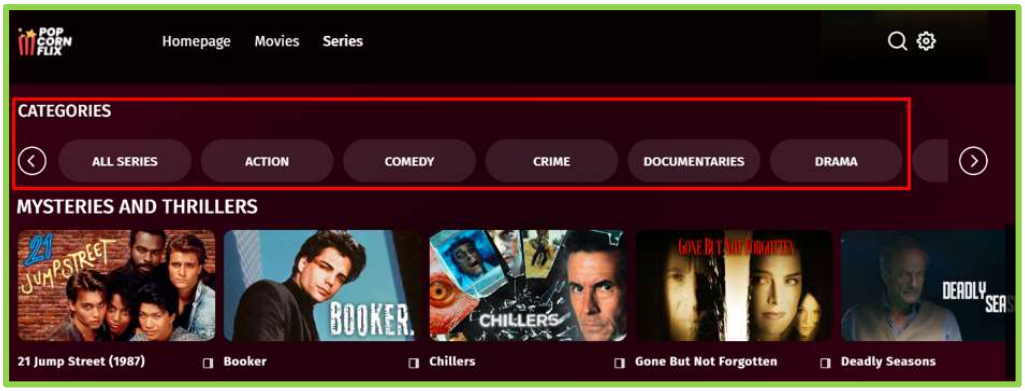
See, e.g., Movie Player page for "Beyond" on Popcornflix website located at https://popcornflix.com/

141. The PCF Application system comprises instructions for receiving a request from a client

for specified content. For example, the PCF Application provides the user's device with code which permits the user's browser to, *inter alia*, display the Crackle website, browse the content available for streaming, and select specific content to view, wherein Crackle's servers receive and interpret code from the user's device indicating the content the user has chosen to view:

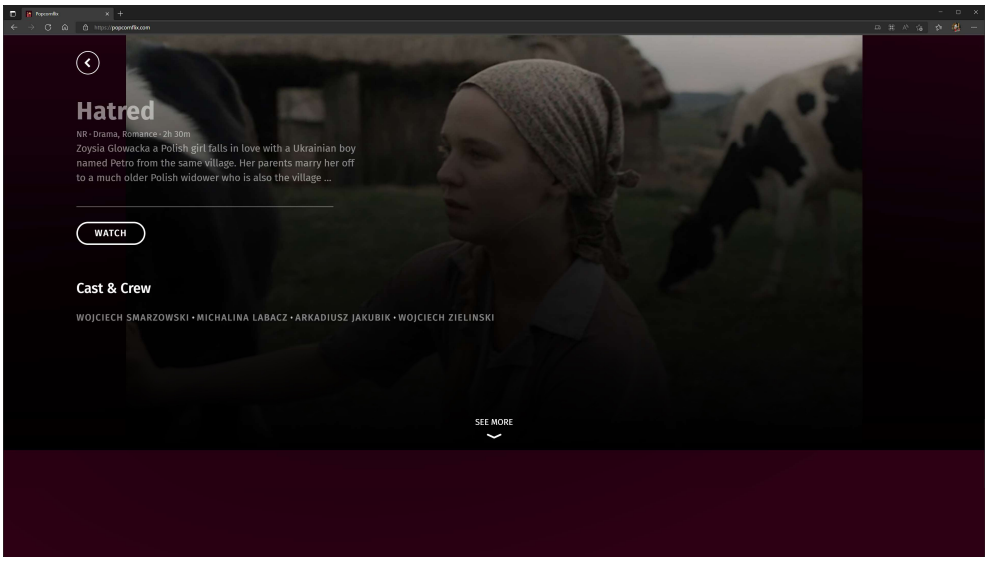




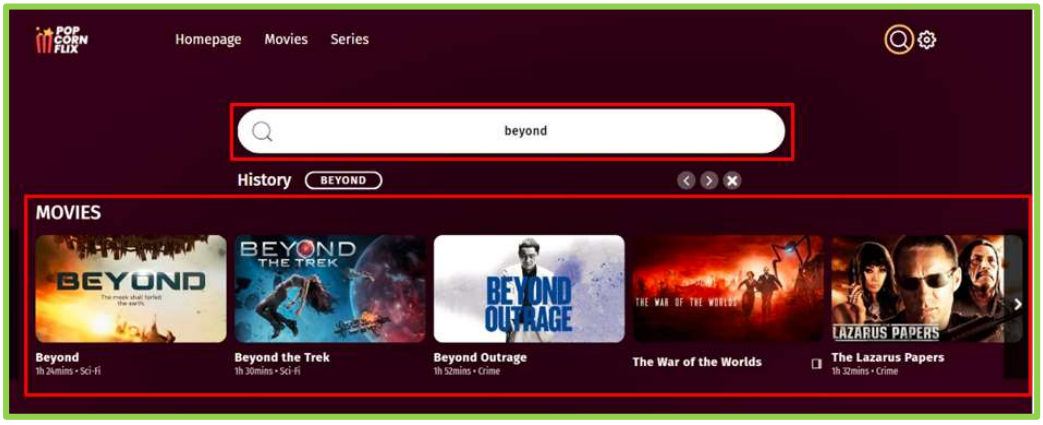


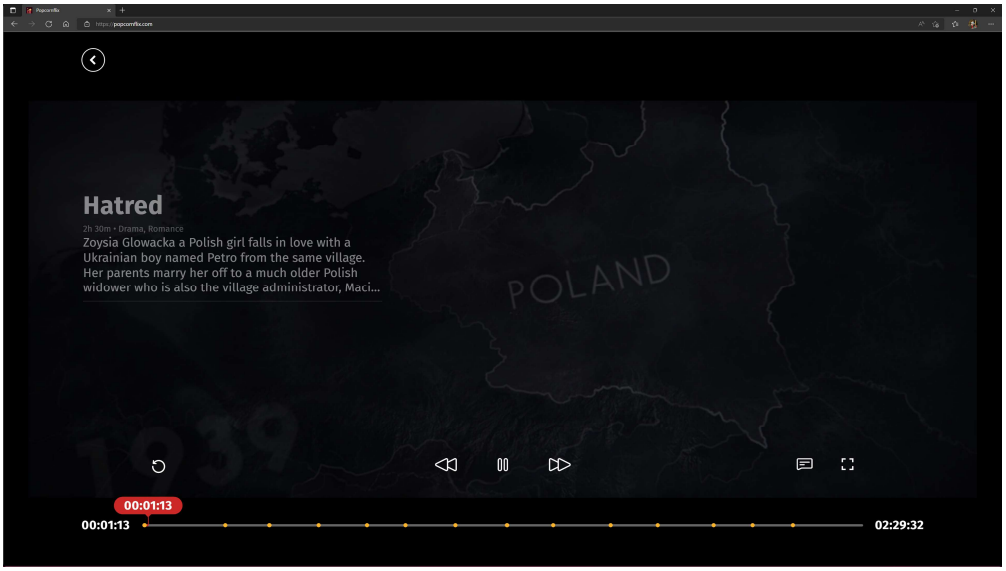
See, e.g., Popcornflix website located at https://popcornflix.com/

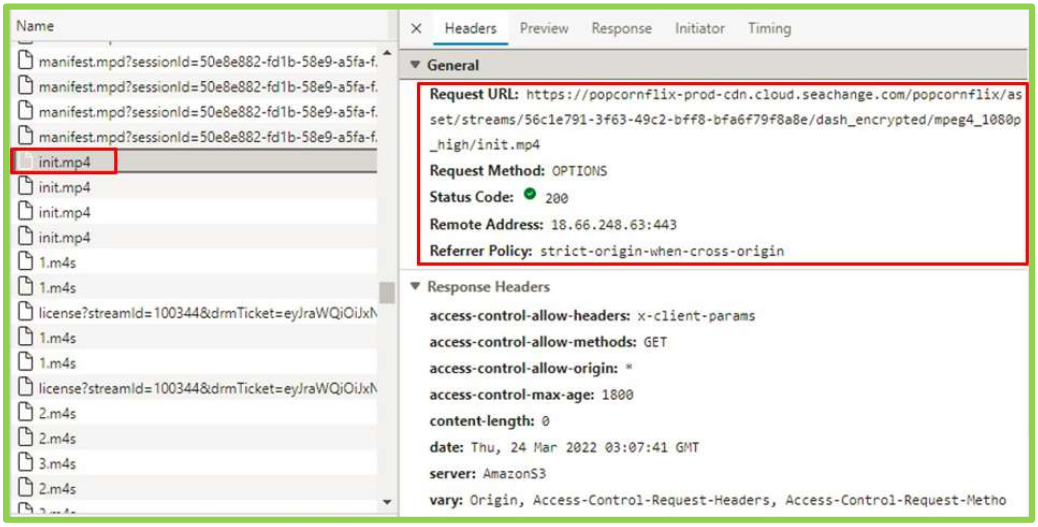
See, e.g., Popcornflix website located at https://popcornflix.com/



See, e.g., Movie Information page for "Hatred" on Popcornflix website located at https://popcornflix.com/



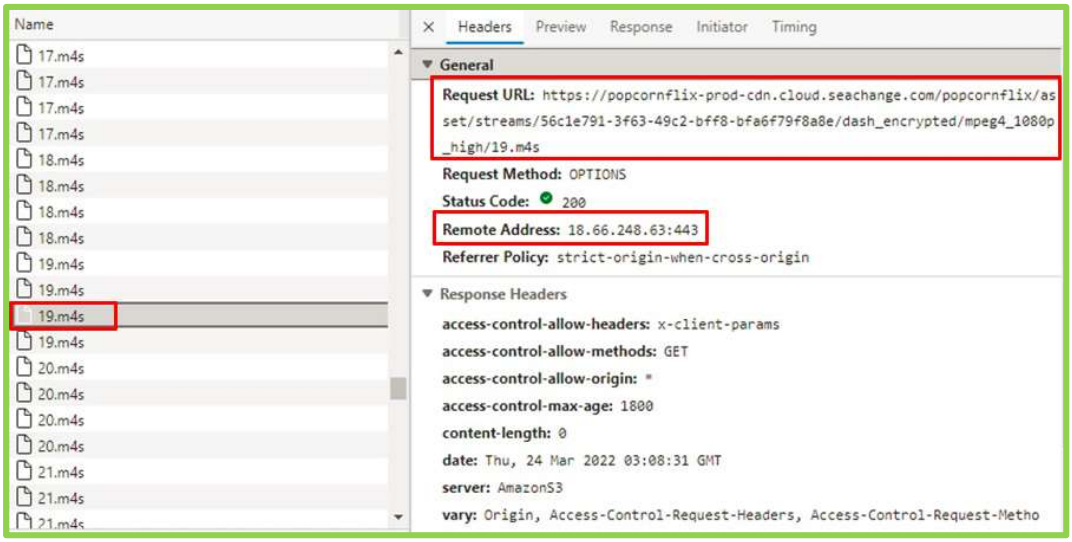

Hatred
2h 30m • Drama, Romance
Zoysia Glowacka a Polish girl falls in love with a Ukrainian boy named Petro from the same village. Her parents marry her off to a much older Polish widower who is also the village administrator, Maci...
POLAND
00:01:13
00:01:13
02:29:32


Name
manifest.mpd?sessionId=50e8e882-fd1b-58e9-a5fa-f.
init.mp4
1.m4s
license?streamId=100344&drmTicket=eyJraWQiOiJxN
2.m4s
3.m4s
Headers
Preview
Response
Initiator
Timing
General
Request URL: https://popcornflix-prod-cdn.cloud.seachange.com/popcornflix/asset/streams/56c1e791-3f63-49c2-bff8-bfa6f79f8a8e/dash_encrypted/mpeg4_1080p_high/init.mp4
Request Method: OPTIONS
Status Code: 200
Remote Address: 18.66.248.63:443
Referrer Policy: strict-origin-when-cross-origin
Response Headers
access-control-allow-headers: x-client-params
access-control-allow-methods: GET
access-control-allow-origin: *
access-control-max-age: 1800
content-length: 0
date: Thu, 24 Mar 2022 03:07:41 GMT
server: AmazonS3
vary: Origin, Access-Control-Request-Headers, Access-Control-Request-Metho

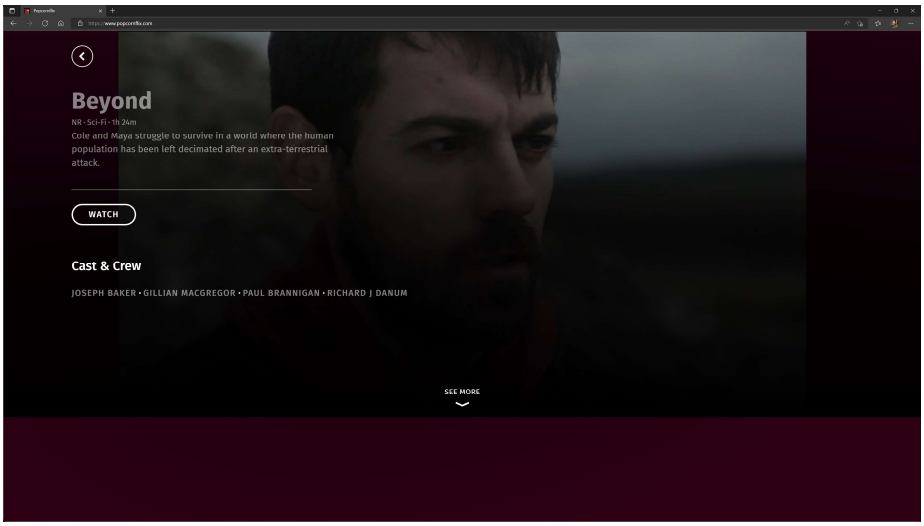
<div dir="auto" class="css-901oao" style="color: rgb(255, 255, 255); font-family: FiraSans-Medium; font-size: 42px; height: 51px; letter-spacing: 0px; line-height: 51px; margin-left: 100px; margin-top: 10px; margin-bottom: 10px; text-align: left; direction: ltr;">MOVIES

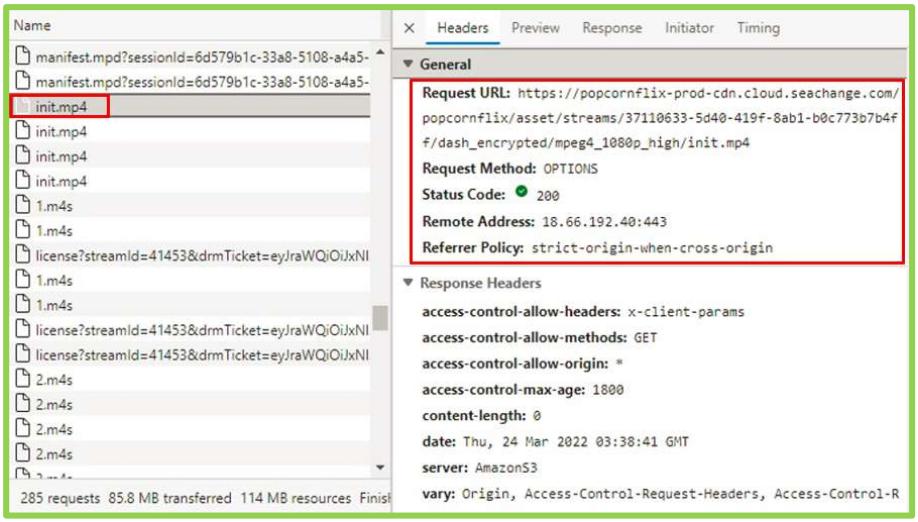
…

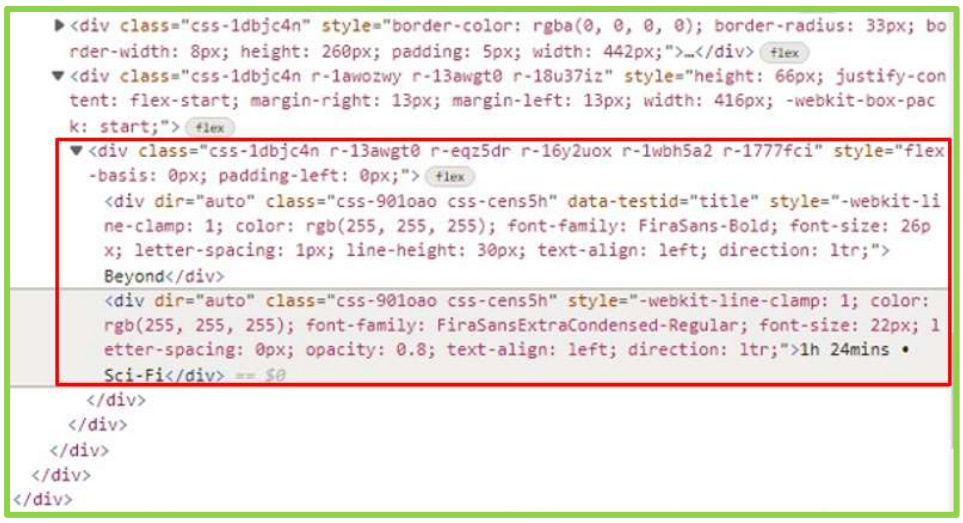
<div dir="auto" class="css-901oao css-cens5h" data-testid="title" style="-webkit-line-clamp: 1; color: rgb(255, 255, 255); font-family: FiraSans-Bold; font-size: 26px; letter-spacing: 1px; line-height: 30px; text-align: left; direction: ltr;">Hatred
<div dir="auto" class="css-901oao css-cens5h" style="-webkit-line-clamp: 1; color: rgb(255, 255, 255); font-family: FiraSansExtraCondensed-Regular; font-size: 22px; letter-spacing: 0px; opacity: 0.8; text-align: left; direction: ltr;">2h 30mins • Drama == $0

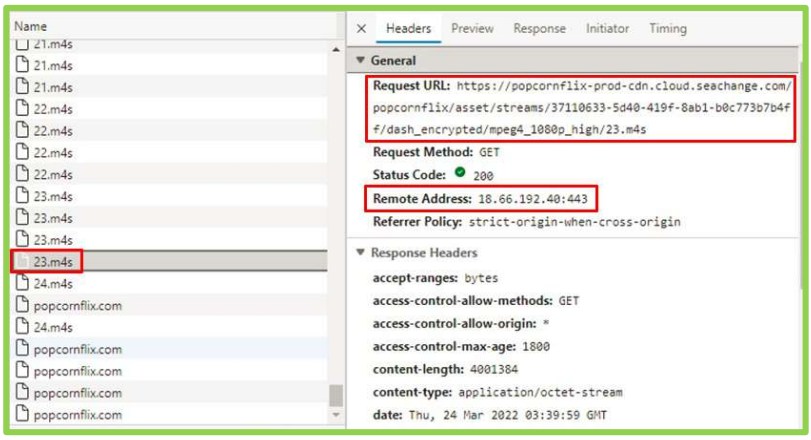


See, e.g., Movie Player page for "Hatred" on Popcornflix website located at https://popcornflix.com/

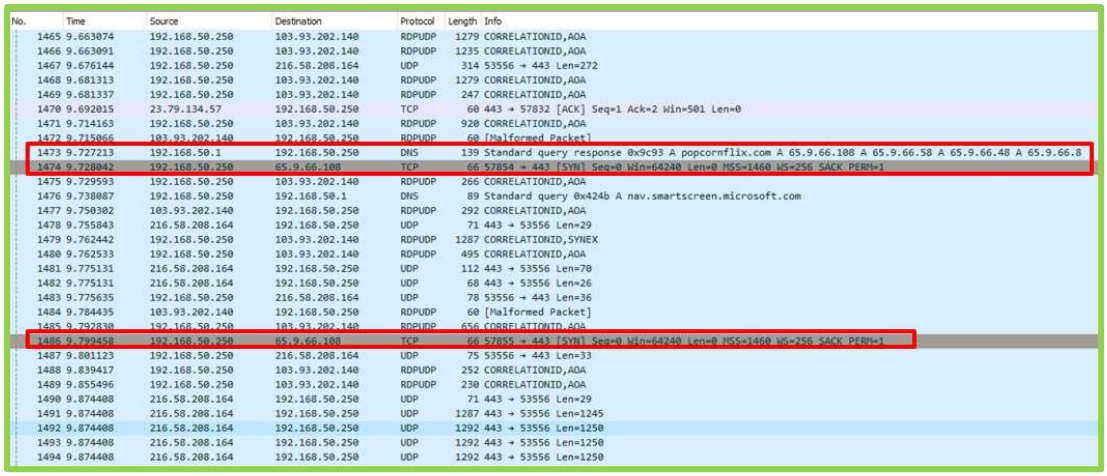


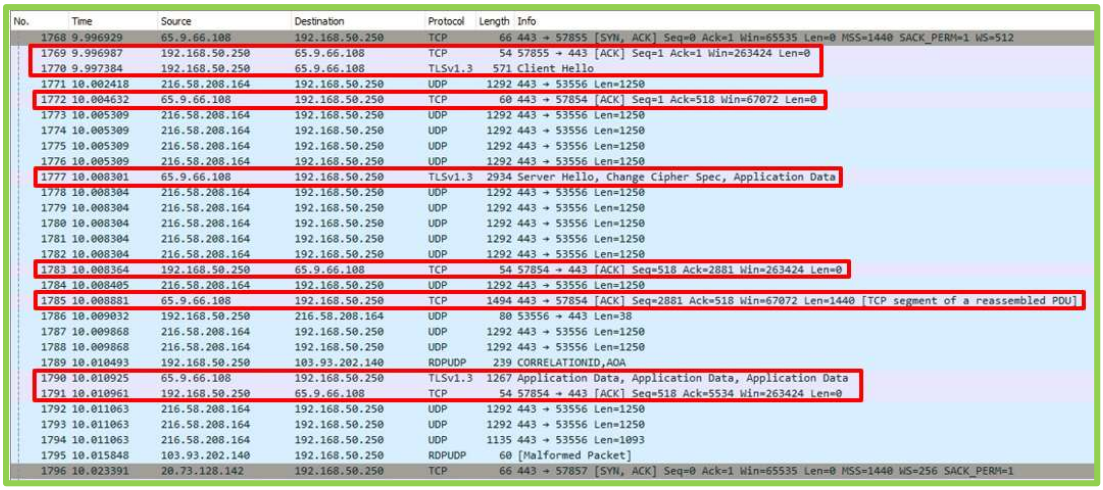






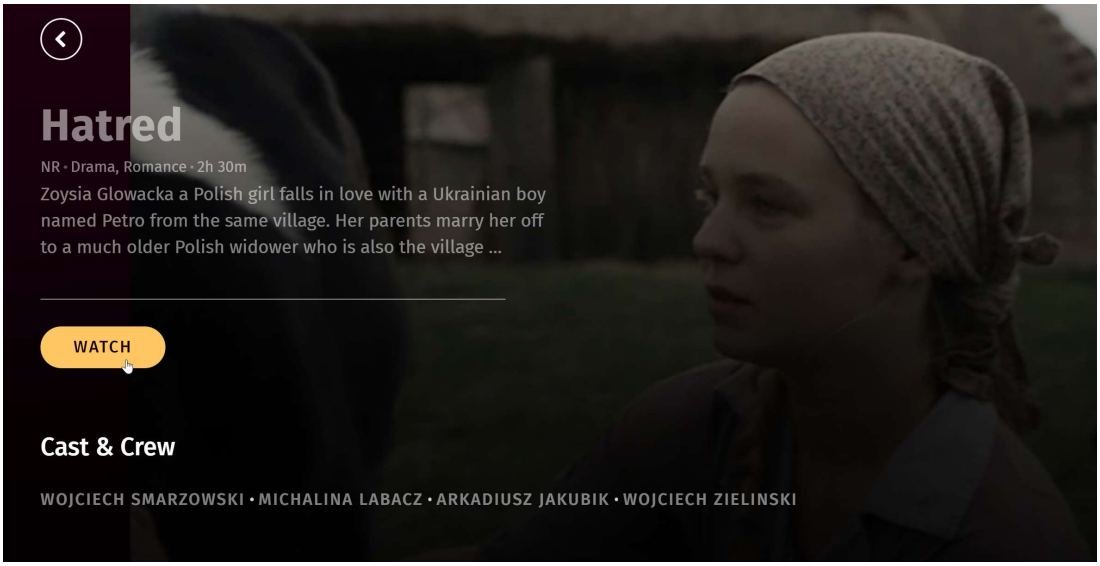
See, e.g., Movie Information page for "Beyond" on Popcornflix website located at https://popcornflix.com/





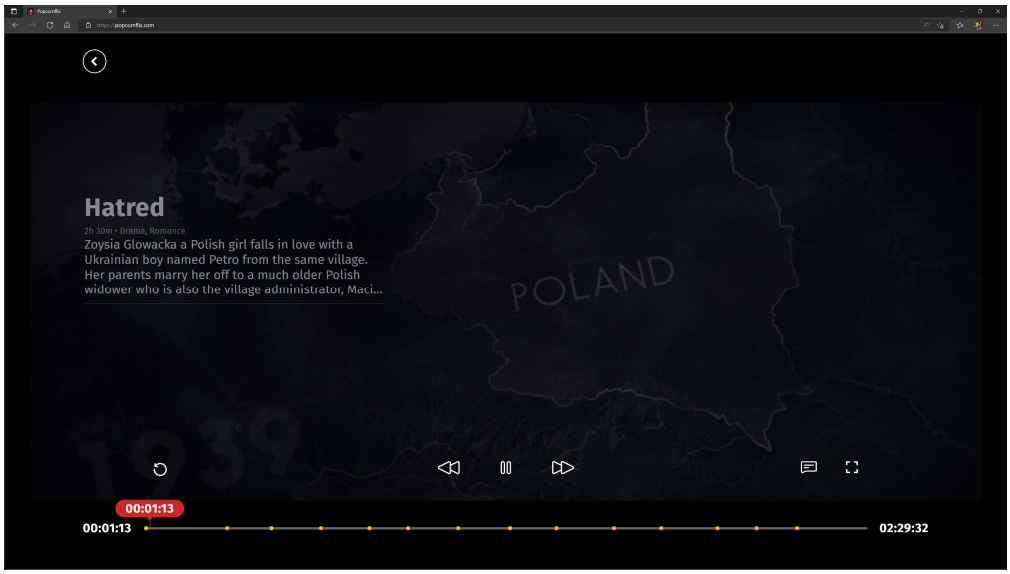
No.	Time	Source	Destination	Protocol	Length	Info
1768	9.996929	65.9.66.108	192.168.50.250	TCP	66	443 → 57855 [SYN, ACK] Seq=0 Ack=1 Win=65535 Len=0 MSS=1440 SACK_PERM=1 WS=512
1769	9.996987	192.168.50.250	65.9.66.108	TCP	54	57855 → 443 [ACK] Seq=1 Ack=1 Win=263424 Len=0
1770	9.997384	192.168.50.250	65.9.66.108	TLSv1.3	571	Client Hello
1771	10.002418	216.58.208.164	192.168.50.250	UDP	1292	443 → 53556 Len=1250
1772	10.004632	65.9.66.108	192.168.50.250	TCP	60	443 → 57854 [ACK] Seq=1 Ack=518 Win=67072 Len=0
1773	10.005309	216.58.208.164	192.168.50.250	UDP	1292	443 → 53556 Len=1250
1774	10.005309	216.58.208.164	192.168.50.250	UDP	1292	443 → 53556 Len=1250
1775	10.005309	216.58.208.164	192.168.50.250	UDP	1292	443 → 53556 Len=1250
1776	10.005309	216.58.208.164	192.168.50.250	UDP	1292	443 → 53556 Len=1250
1777	10.008301	65.9.66.108	192.168.50.250	TLSv1.3	2934	Server Hello, Change Cipher Spec, Application Data
1778	10.008304	216.58.208.164	192.168.50.250	UDP	1292	443 → 53556 Len=1250
1779	10.008304	216.58.208.164	192.168.50.250	UDP	1292	443 → 53556 Len=1250
1780	10.008304	216.58.208.164	192.168.50.250	UDP	1292	443 → 53556 Len=1250
1781	10.008304	216.58.208.164	192.168.50.250	UDP	1292	443 → 53556 Len=1250
1782	10.008304	216.58.208.164	192.168.50.250	UDP	1292	443 → 53556 Len=1250
1783	10.008364	192.168.50.250	65.9.66.108	TCP	54	57854 → 443 [ACK] Seq=518 Ack=2881 Win=263424 Len=0
1784	10.008405	216.58.208.164	192.168.50.250	UDP	1292	443 → 53556 Len=1250
1785	10.008881	65.9.66.108	192.168.50.250	TCP	1494	443 → 57854 [ACK] Seq=2881 Ack=518 Win=67072 Len=1440 [TCP segment of a reassembled PDU]
1786	10.009032	192.168.50.250	216.58.208.164	UDP	80	53556 → 443 Len=38
1787	10.009868	216.58.208.164	192.168.50.250	UDP	1292	443 → 53556 Len=1250
1788	10.009868	216.58.208.164	192.168.50.250	UDP	1292	443 → 53556 Len=1250
1789	10.010493	192.168.50.250	103.93.202.140	RDPUDP	239	CORRELATIONID,AOA
1790	10.010925	65.9.66.108	192.168.50.250	TLSv1.3	1267	Application Data, Application Data, Application Data
1791	10.010961	192.168.50.250	65.9.66.108	TCP	54	57854 → 443 [ACK] Seq=518 Ack=5534 Win=263424 Len=0
1792	10.011063	216.58.208.164	192.168.50.250	UDP	1292	443 → 53556 Len=1250
1793	10.011063	216.58.208.164	192.168.50.250	UDP	1292	443 → 53556 Len=1250
1794	10.011063	216.58.208.164	192.168.50.250	UDP	1135	443 → 53556 Len=1093
1795	10.015848	103.93.202.140	192.168.50.250	RDPUDP	60	[Malformed Packet]
1796	10.023391	20.73.128.142	192.168.50.250	TCP	66	443 → 57857 [SYN, ACK] Seq=0 Ack=1 Win=65535 Len=0 MSS=1440 WS=256 SACK_PERM=1

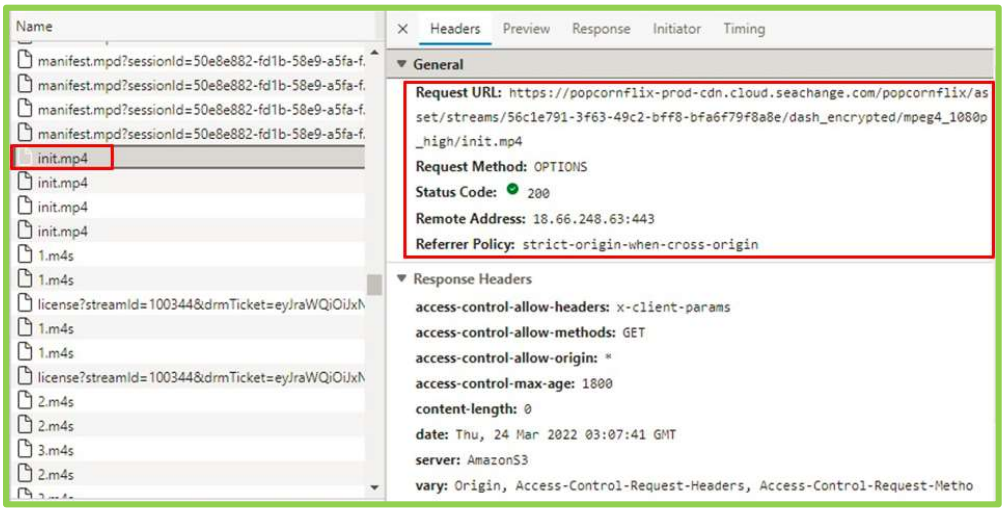
142. The PCF Application system comprises instructions for communicating to the client the identity of a node server having the specified content stored thereon. For example, the PCF Application determines whether a third-party server contains the user's chosen content and transmits the identity, *e.g.*, IP address, of the server to the user's device:

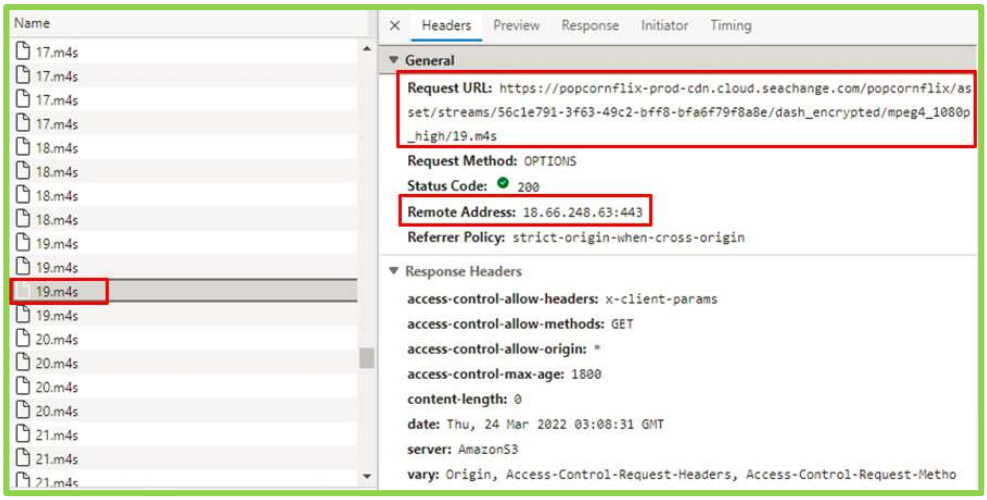


See, e.g., Movie Information page for "Hatred" on Popcornflix website located at https://popcornflix.com/

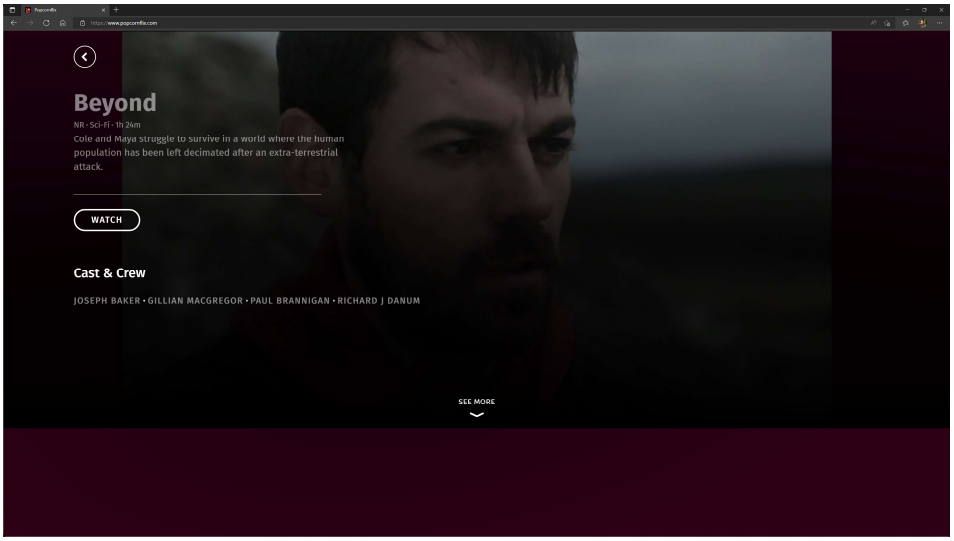
GERMANY
POLAND
USSR
GERMANY
1939
CZECHOSLOVAKIA
HUNGARY
ROMANIA

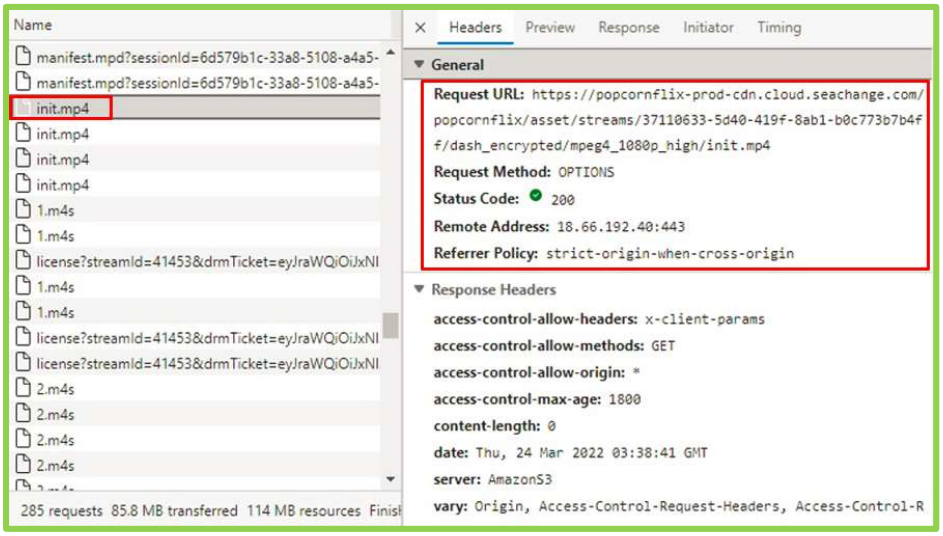

Hatred
2h 30m • Drama, Romance
Zoysia Glowacka a Polish girl falls in love with a Ukrainian boy named Petro from the same village. Her parents marry her off to a much older Polish widower who is also the village administrator, Maci...
POLAND
00:01:13
00:01:13
02:29:32

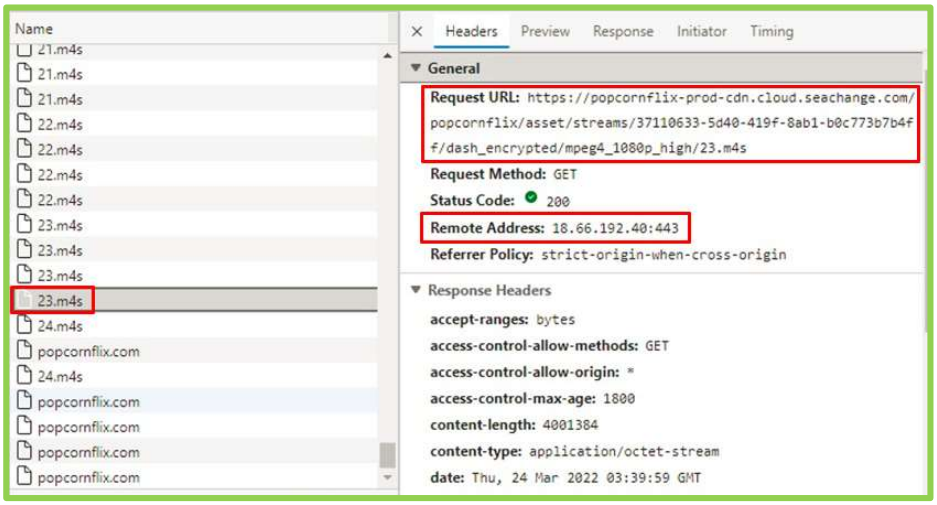

Name
manifest.mpd?sessionId=50e8e882-fd1b-58e9-a5fa-f.
manifest.mpd?sessionId=50e8e882-fd1b-58e9-a5fa-f.
manifest.mpd?sessionId=50e8e882-fd1b-58e9-a5fa-f.
manifest.mpd?sessionId=50e8e882-fd1b-58e9-a5fa-f.
init.mp4
init.mp4
init.mp4
init.mp4
1.m4s
1.m4s
license?streamId=100344&drmTicket=eyJraWQiOiJxN
1.m4s
1.m4s
license?streamId=100344&drmTicket=eyJraWQiOiJxN
2.m4s
2.m4s
3.m4s
2.m4s
Headers
Preview
Response
Initiator
Timing
General
Request URL: https://popcornflix-prod-cdn.cloud.seachange.com/popcornflix/asset/streams/56c1e791-3f63-49c2-bff8-bfa6f79f8a8e/dash_encrypted/mpeg4_1080p_high/init.mp4
Request Method: OPTIONS
Status Code: 200
Remote Address: 18.66.248.63:443
Referrer Policy: strict-origin-when-cross-origin
Response Headers
access-control-allow-headers: x-client-params
access-control-allow-methods: GET
access-control-allow-origin: *
access-control-max-age: 1800
content-length: 0
date: Thu, 24 Mar 2022 03:07:41 GMT
server: AmazonS3
vary: Origin, Access-Control-Request-Headers, Access-Control-Request-Metho



See, e.g., Movie Player page for "Hatred" on Popcornflix website located at https://popcornflix.com/





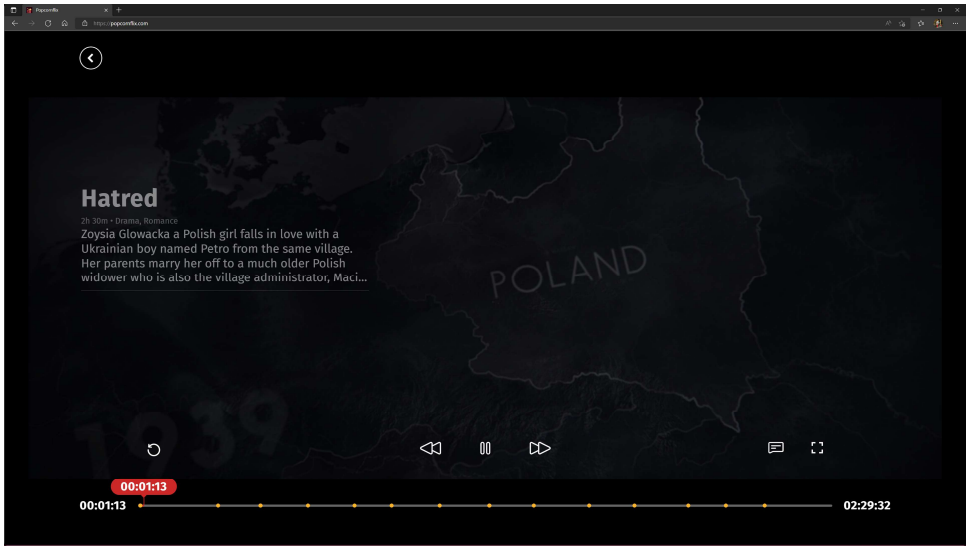


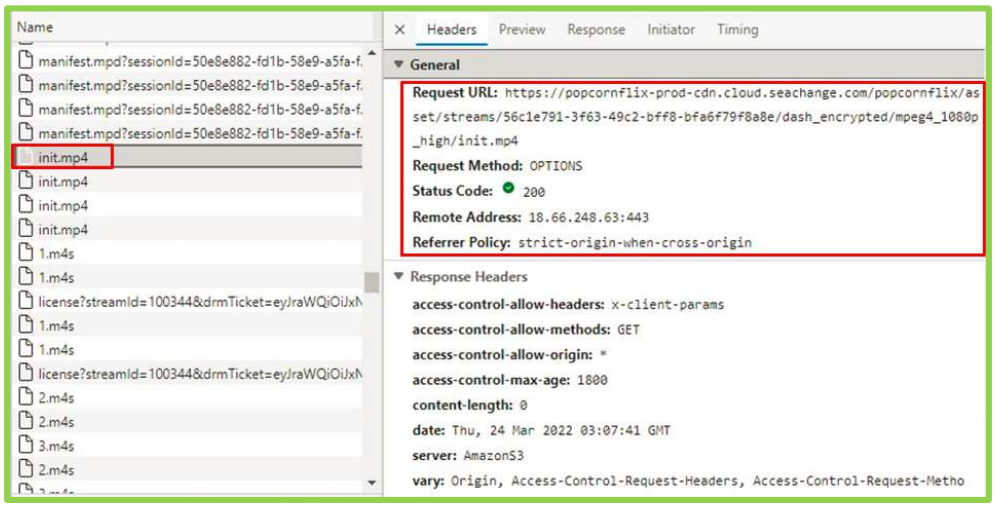
See, e.g., Movie Information page for "Beyond" on Popcornflix website located at https://popcornflix.com/

143. The PCF Application system enables the client to request transmission of the specified

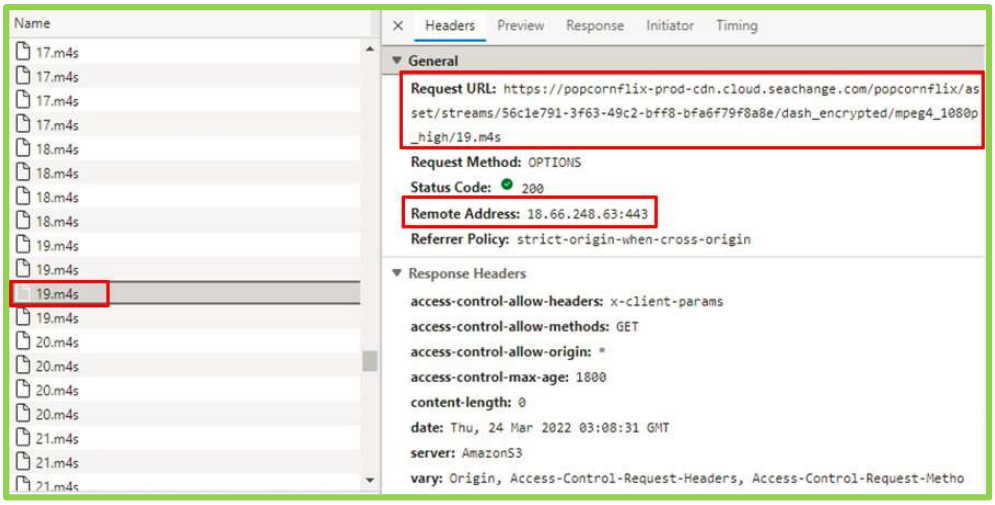
content from the node server. For example, the PCF Application instructs and/or controls the user's browser on the user's device running code to connect to the identified third-party server, including via the server's IP address, where the user's device then requests the chosen content be transmitted:

See, e.g., Movie Information page for "Hatred" on Popcornflix website located at https://popcornflix.com/

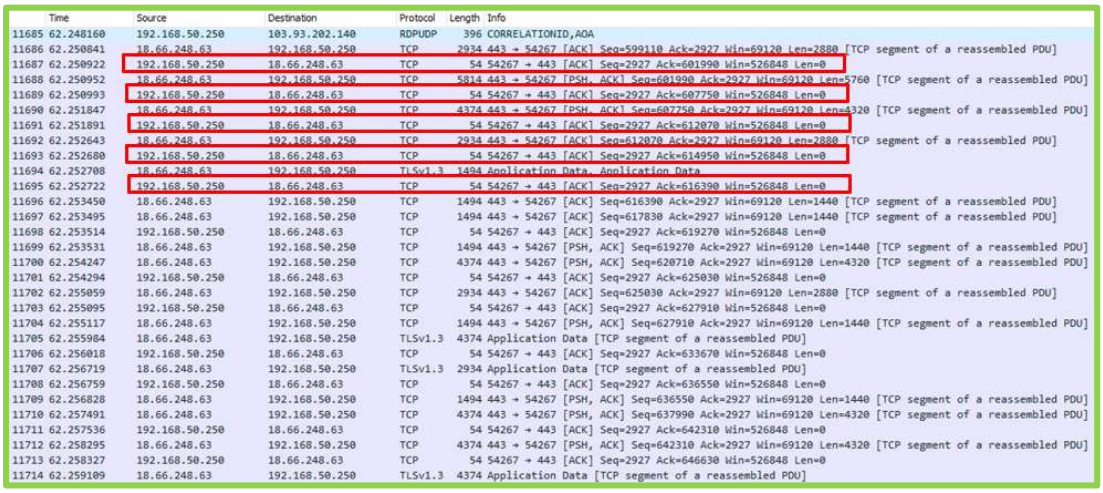

Hatred
2h 30m • Drama, Romance
Zoysia Glowacka a Polish girl falls in love with a Ukrainian boy named Petro from the same village. Her parents marry her off to a much older Polish widower who is also the village administrator, Maci...
POLAND
00:01:13
00:01:13
02:29:32

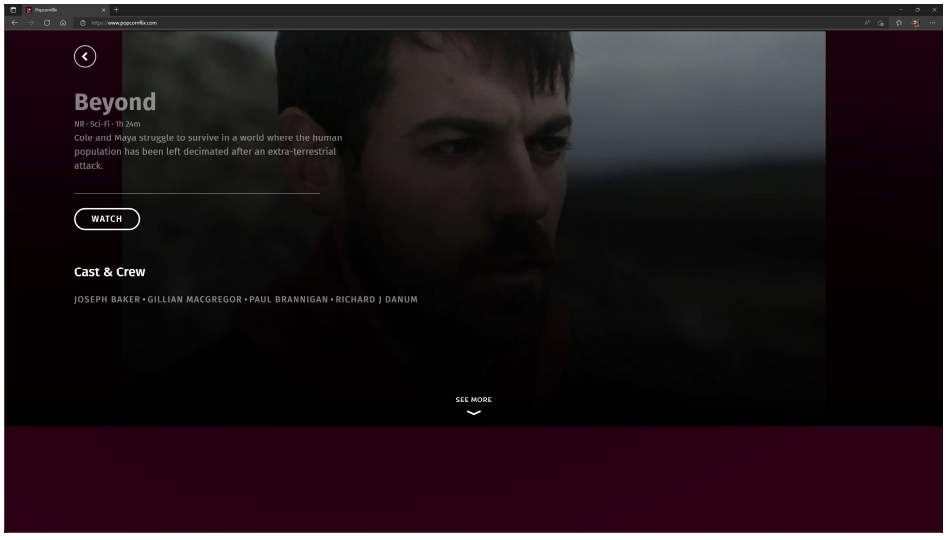

Name
manifest.mpd?sessionId=50e8e882-fd1b-58e9-a5fa-f.
init.mp4
1.m4s
2.m4s
3.m4s
Headers
Preview
Response
Initiator
Timing
General
Request URL: https://popcornflix-prod-cdn.cloud.seachange.com/popcornflix/asset/streams/56c1e791-3f63-49c2-bff8-bfa6f79f8a8e/dash_encrypted/mpeg4_1080p_high/init.mp4
Request Method: OPTIONS
Status Code: 200
Remote Address: 18.66.248.63:443
Referrer Policy: strict-origin-when-cross-origin
Response Headers
access-control-allow-headers: x-client-params
access-control-allow-methods: GET
access-control-allow-origin: *
access-control-max-age: 1800
content-length: 0
date: Thu, 24 Mar 2022 03:07:41 GMT
server: AmazonS3
vary: Origin, Access-Control-Request-Headers, Access-Control-Request-Metho

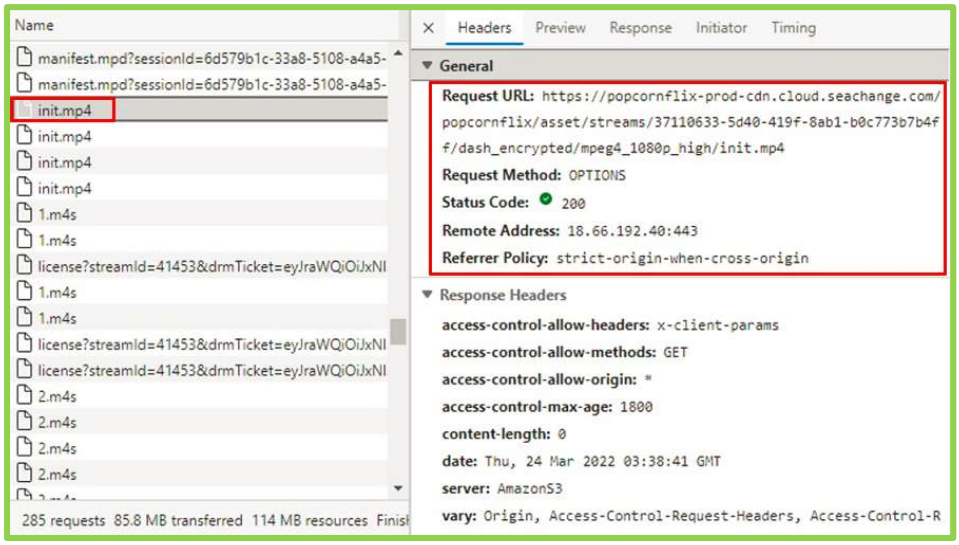
Hatred
2h 30mins • Drama

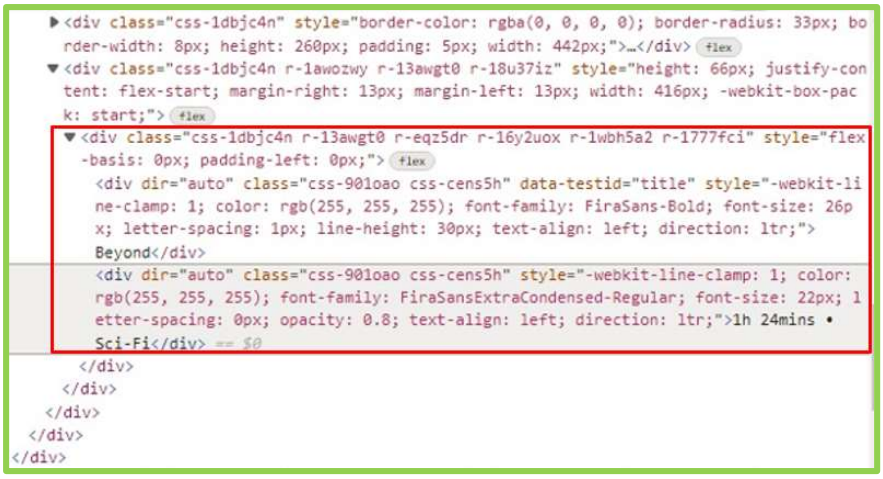


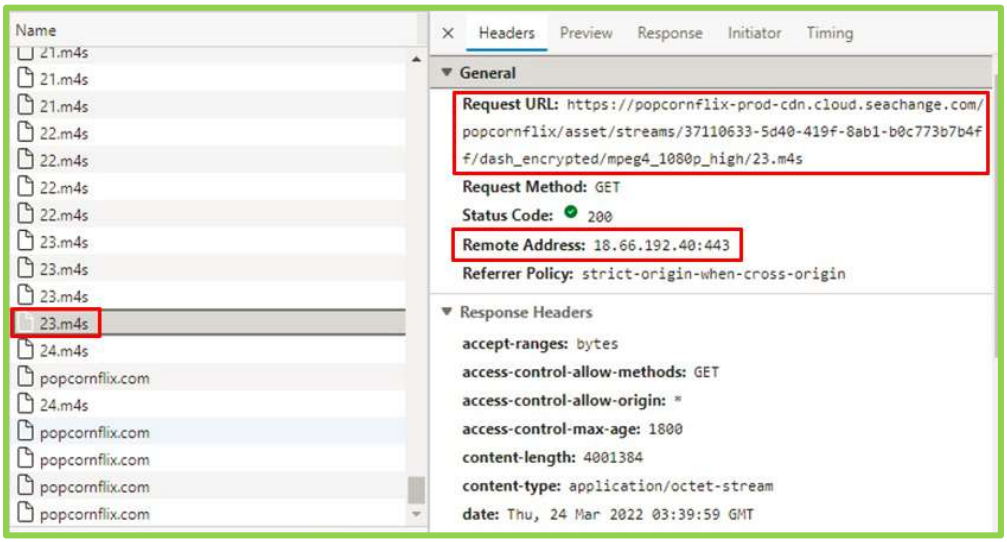
See, e.g., Movie Player page for "Hatred" on Popcornflix website located at https://popcornflix.com/







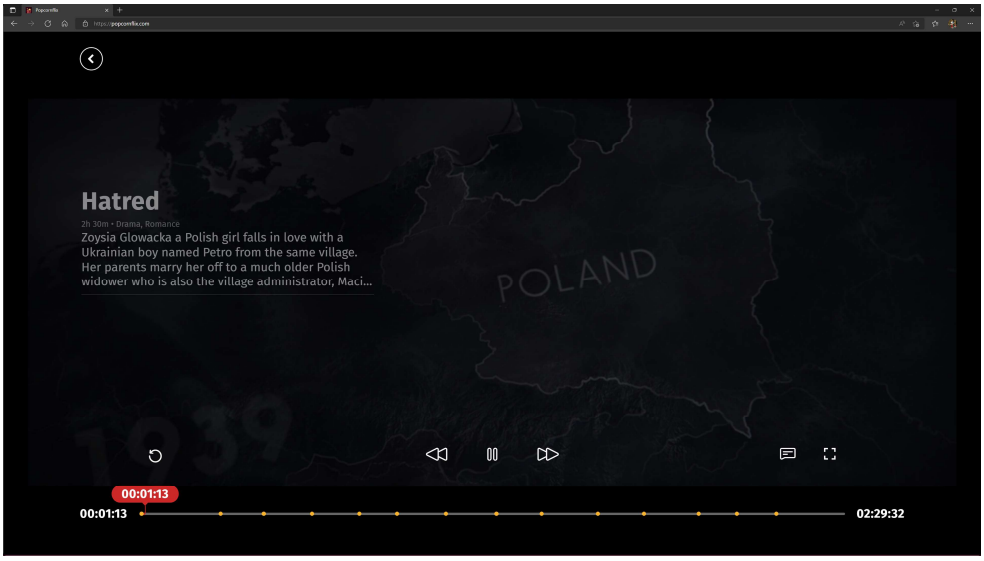


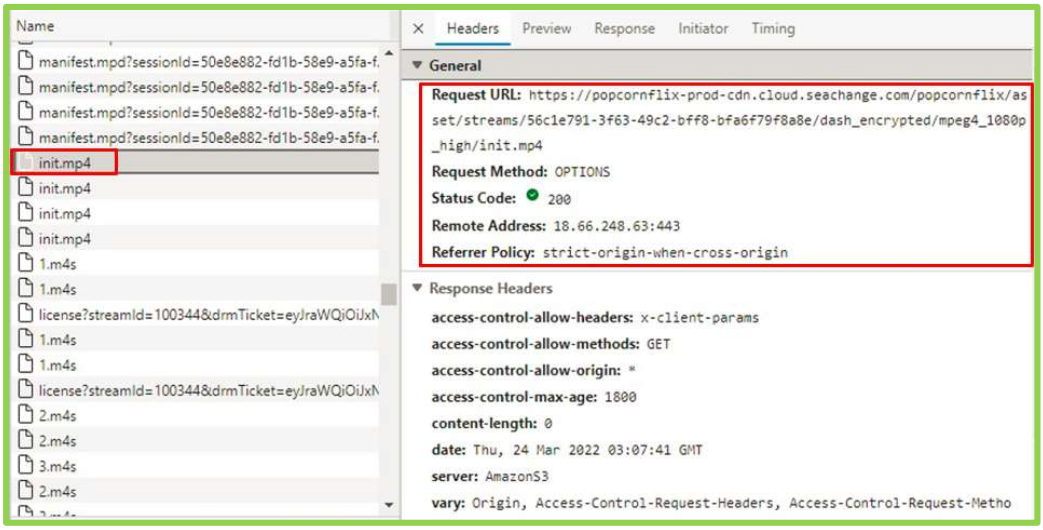


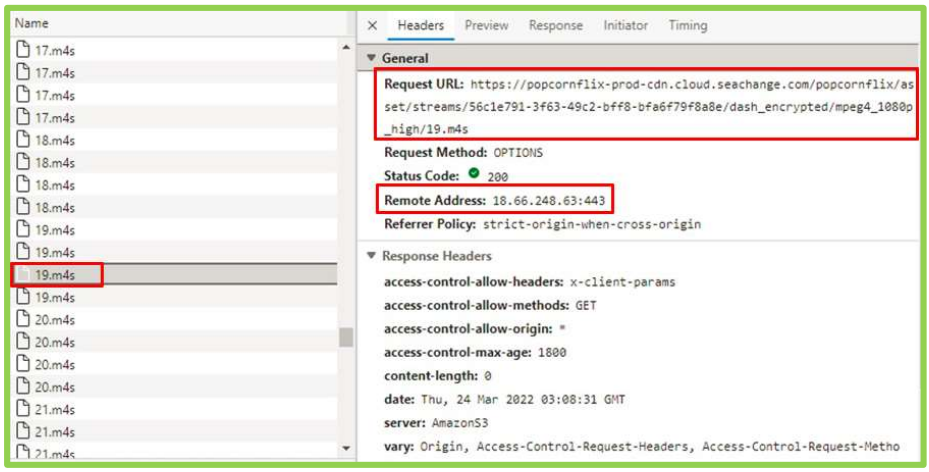
See, e.g., Movie Player page for "Beyond" on Popcornflix website located at https://popcornflix.com/

	Time	Source	Destination	Protocol	Length	Info
15475	70.668540	192.168.50.250	18.66.192.40	TCP	54	49561 → 443 [ACK] Seq=2459 Ack=2897763 Win=2108160 Len=0
15476	70.668660	18.66.192.40	192.168.50.250	TLSv1.3	7254	Application Data [TCP segment of a reassembled PDU]
15477	70.668660	18.66.192.40	192.168.50.250	TCP	1494	443 → 49561 [PSH, ACK] Seq=2904963 Ack=2459 Win=69120 Len=1440 [TCP segment of a reassembled PDU]
15478	70.668676	192.168.50.250	18.66.192.40	TCP	54	49561 → 443 [ACK] Seq=2459 Ack=2906403 Win=2108160 Len=0
15479	70.669289	192.168.50.250	103.93.202.140	RDPUDP	1279	CORRELATIONID,SYNEX
15480	70.669334	192.168.50.250	103.93.202.140	RDPUDP	956	CORRELATIONID,SYNEX
15481	70.669396	18.66.192.40	192.168.50.250	TCP	1494	443 → 49561 [ACK] Seq=2906403 Ack=2459 Win=69120 Len=1440 [TCP segment of a reassembled PDU]
15482	70.669396	18.66.192.40	192.168.50.250	TLSv1.3	7254	Application Data, Application Data
15483	70.669396	18.66.192.40	192.168.50.250	TCP	1494	443 → 49561 [ACK] Seq=2915043 Ack=2459 Win=69120 Len=1440 [TCP segment of a reassembled PDU]
15484	70.669396	18.66.192.40	192.168.50.250	TCP	2934	443 → 49561 [ACK] Seq=2916483 Ack=2459 Win=69120 Len=2880 [TCP segment of a reassembled PDU]
15485	70.669396	18.66.192.40	192.168.50.250	TCP	182	443 → 49561 [PSH, ACK] Seq=2919363 Ack=2459 Win=69120 Len=128 [TCP segment of a reassembled PDU]
15486	70.669420	192.168.50.250	18.66.192.40	TCP	54	49561 → 443 [ACK] Seq=2459 Ack=2919491 Win=2108160 Len=0
15487	70.670118	18.66.192.40	192.168.50.250	TLSv1.3	2934	Application Data [TCP segment of a reassembled PDU]
15488	70.670140	192.168.50.250	18.66.192.40	TCP	54	49561 → 443 [ACK] Seq=2459 Ack=2922371 Win=2108160 Len=0
15489	70.670274	18.66.192.40	192.168.50.250	TCP	4374	443 → 49561 [ACK] Seq=2922371 Ack=2459 Win=69120 Len=4320 [TCP segment of a reassembled PDU]
15490	70.670274	18.66.192.40	192.168.50.250	TLSv1.3	1494	Application Data [TCP segment of a reassembled PDU]
15491	70.670274	18.66.192.40	192.168.50.250	TLSv1.3	5814	Application Data [TCP segment of a reassembled PDU]
15492	70.670300	192.168.50.250	18.66.192.40	TCP	54	49561 → 443 [ACK] Seq=2459 Ack=2933891 Win=2108160 Len=0
15493	70.671065	18.66.192.40	192.168.50.250	TCP	4374	443 → 49561 [ACK] Seq=2933891 Ack=2459 Win=69120 Len=4320 [TCP segment of a reassembled PDU]
15494	70.671107	192.168.50.250	18.66.192.40	TCP	54	49561 → 443 [ACK] Seq=2459 Ack=2938211 Win=2108160 Len=0
15495	70.671426	103.93.202.140	192.168.50.250	RDPUDP	60	SYNEX
15496	70.671453	18.66.192.40	192.168.50.250	TLSv1.3	5814	Application Data [TCP segment of a reassembled PDU]
15497	70.671453	18.66.192.40	192.168.50.250	TCP	1494	443 → 49561 [ACK] Seq=2943971 Ack=2459 Win=69120 Len=1440 [TCP segment of a reassembled PDU]
15498	70.671453	18.66.192.40	192.168.50.250	TLSv1.3	2934	Application Data [TCP segment of a reassembled PDU]
15499	70.671491	192.168.50.250	18.66.192.40	TCP	54	49561 → 443 [ACK] Seq=2459 Ack=2948291 Win=2108160 Len=0
15500	70.671953	192.168.50.250	103.93.202.140	RDPUDP	514	CORRELATIONID,SYNEX
15501	70.671992	18.66.192.40	192.168.50.250	TLSv1.3	2934	Application Data [TCP segment of a reassembled PDU]
15502	70.672015	192.168.50.250	18.66.192.40	TCP	54	49561 → 443 [ACK] Seq=2459 Ack=2951171 Win=2108160 Len=0
15503	70.672069	18.66.192.40	192.168.50.250	TCP	2934	443 → 49561 [ACK] Seq=2951171 Ack=2459 Win=69120 Len=2880 [TCP segment of a reassembled PDU]
15504	70.672069	18.66.192.40	192.168.50.250	TCP	1494	443 → 49561 [ACK] Seq=2954051 Ack=2459 Win=69120 Len=1440 [TCP segment of a reassembled PDU]

144. The PCF Application system comprises instructions for ascertaining that the node server transmitted the specified content to the client. For example, the PCF Application receives updates from the user's device and/or the third-party server indicating that all, or a part, of the content has been transferred to the user's device, which may occur in smaller pieces or "chunks," and the PCF Application updates the Crackle webpage for the user to indicate that at least a portion of the content has already been viewed:


Hatred
2h 30m • Drama, Romance
Zoysia Glowacka a Polish girl falls in love with a Ukrainian boy named Petro from the same village. Her parents marry her off to a much older Polish widower who is also the village administrator, Maci...
POLAND
00:01:13
00:01:13
02:29:32


Name
manifest.mpd?sessionId=50e8e882-fd1b-58e9-a5fa-f.
manifest.mpd?sessionId=50e8e882-fd1b-58e9-a5fa-f.
manifest.mpd?sessionId=50e8e882-fd1b-58e9-a5fa-f.
manifest.mpd?sessionId=50e8e882-fd1b-58e9-a5fa-f.
init.mp4
init.mp4
init.mp4
init.mp4
1.m4s
1.m4s
license?streamId=100344&drmTicket=eyJraWQiOiJxN
1.m4s
1.m4s
license?streamId=100344&drmTicket=eyJraWQiOiJxN
2.m4s
2.m4s
3.m4s
2.m4s
Headers
Preview
Response
Initiator
Timing
General
Request URL: https://popcornflix-prod-cdn.cloud.seachange.com/popcornflix/asset/streams/56c1e791-3f63-49c2-bff8-bfa6f79f8a8e/dash_encrypted/mpeg4_1080p_high/init.mp4
Request Method: OPTIONS
Status Code: 200
Remote Address: 18.66.248.63:443
Referrer Policy: strict-origin-when-cross-origin
Response Headers
access-control-allow-headers: x-client-params
access-control-allow-methods: GET
access-control-allow-origin: *
access-control-max-age: 1800
content-length: 0
date: Thu, 24 Mar 2022 03:07:41 GMT
server: AmazonS3
vary: Origin, Access-Control-Request-Headers, Access-Control-Request-Metho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21.m4s
Headers
Preview
Response
Initiator
Timing
General
Request URL: https://popcornflix-prod-cdn.cloud.seachange.com/popcornflix/asset/streams/56c1e791-3f63-49c2-bff8-bfa6f79f8a8e/dash_encrypted/mpeg4_1080p_high/19.m4s
Request Method: OPTIONS
Status Code: 200
Remote Address: 18.66.248.63:443
Referrer Policy: strict-origin-when-cross-origin
Response Headers
access-control-allow-headers: x-client-params
access-control-allow-methods: GET
access-control-allow-origin: *
access-control-max-age: 1800
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date: Thu, 24 Mar 2022 03:08:31 GMT
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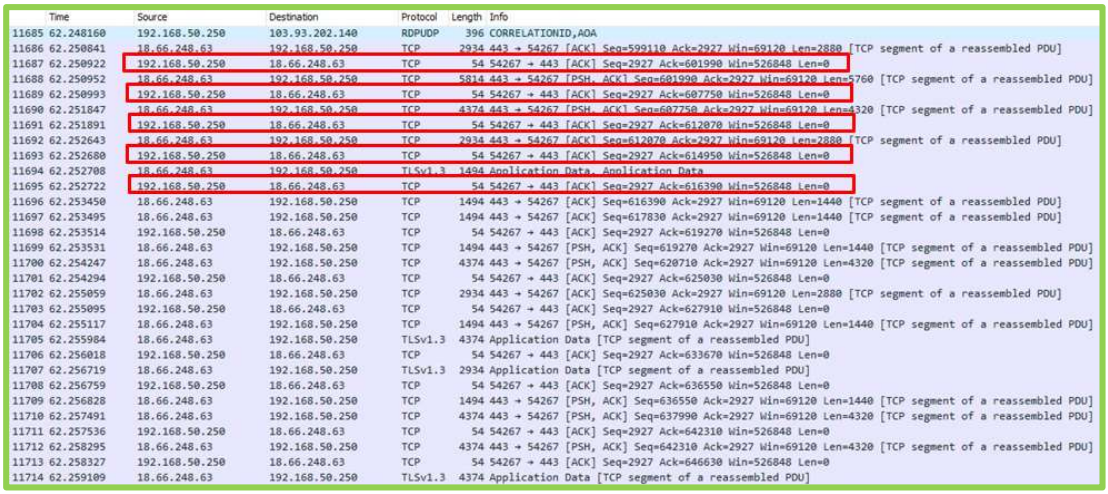
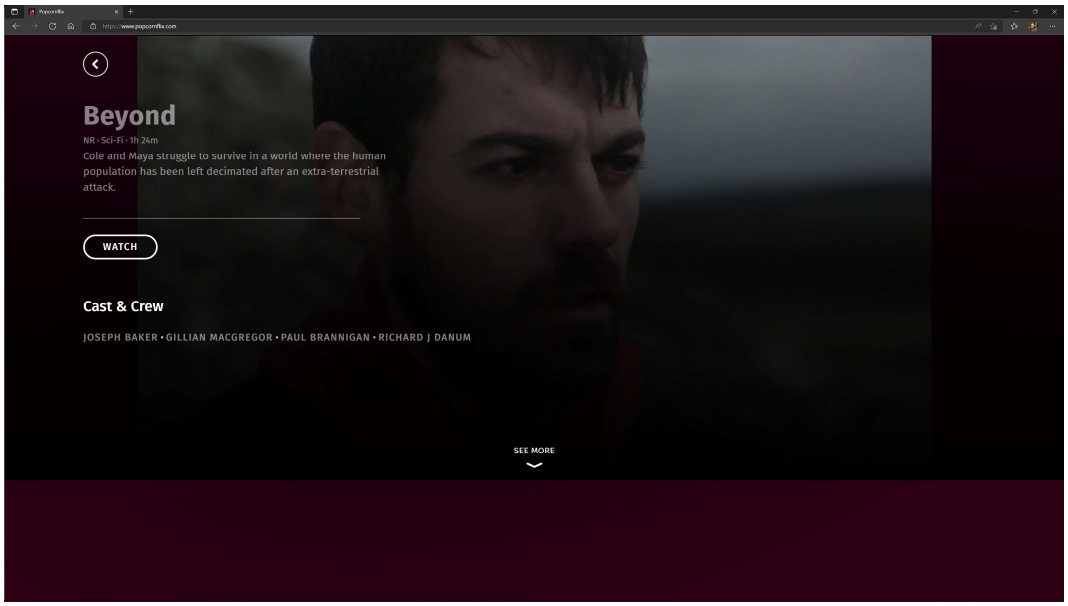
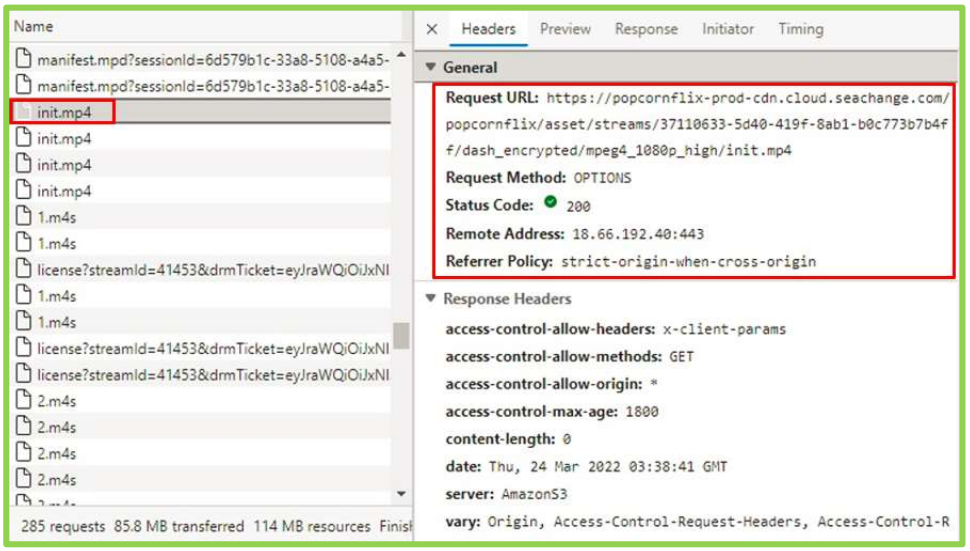
vary: Origin, Access-Control-Request-Headers, Access-Control-Request-Metho

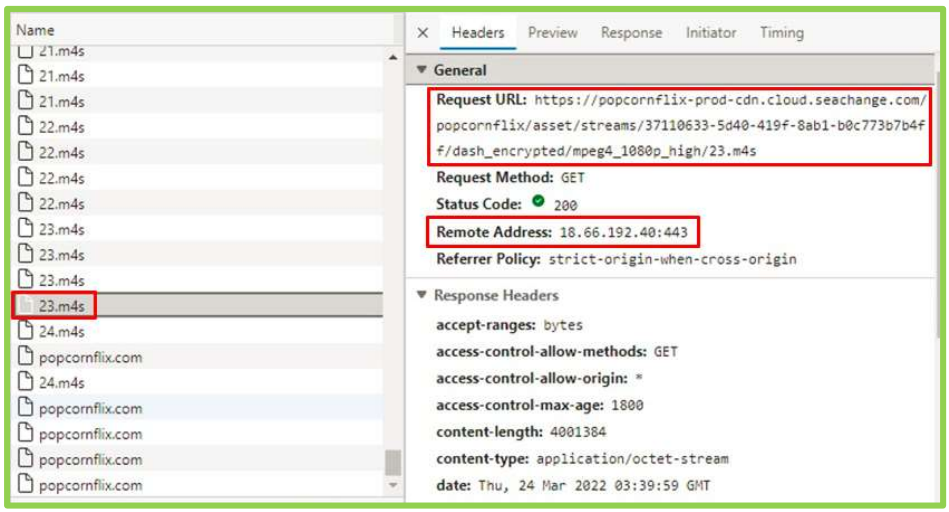


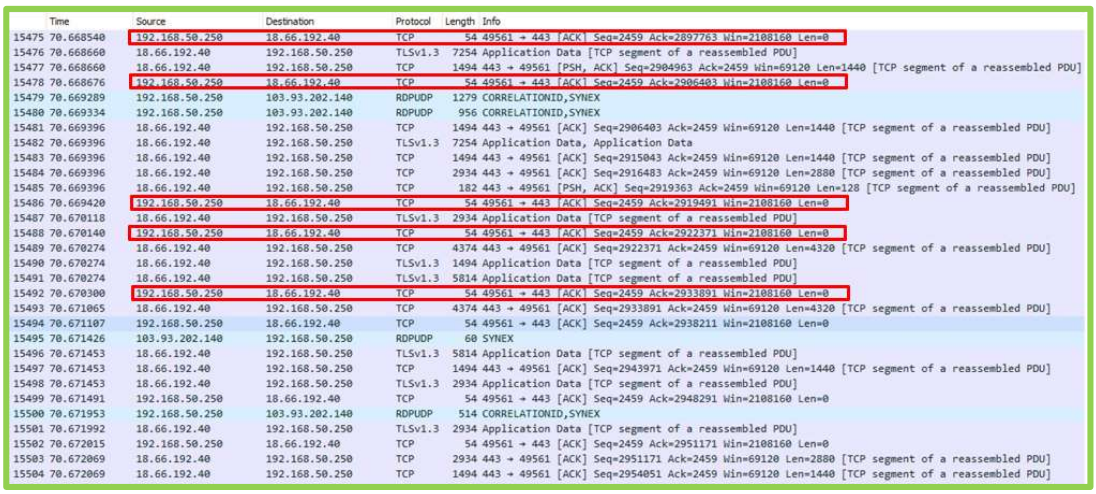
	Time	Source	Destination	Protocol	Length	Info
11685	62.248160	192.168.50.250	103.93.202.140	RDPUDP	396	CORRELATIONID,AOA
11686	62.250841	18.66.248.63	192.168.50.250	TCP	2934	443 → 54267 [ACK] Seq=599110 Ack=2927 Win=69120 Len=2880 [TCP segment of a reassembled PDU]
11687	62.250922	192.168.50.250	18.66.248.63	TCP	54	54267 → 443 [ACK] Seq=2927 Ack=601990 Win=526848 Len=0
11688	62.250952	18.66.248.63	192.168.50.250	TCP	5814	443 → 54267 [PSH, ACK] Seq=601990 Ack=2927 Win=69120 Len=5760 [TCP segment of a reassembled PDU]
11689	62.250993	192.168.50.250	18.66.248.63	TCP	54	54267 → 443 [ACK] Seq=2927 Ack=607750 Win=526848 Len=0
11690	62.251847	18.66.248.63	192.168.50.250	TCP	4374	443 → 54267 [PSH, ACK] Seq=607750 Ack=2927 Win=69120 Len=4320 [TCP segment of a reassembled PDU]
11691	62.251891	192.168.50.250	18.66.248.63	TCP	54	54267 → 443 [ACK] Seq=2927 Ack=612070 Win=526848 Len=0
11692	62.252643	18.66.248.63	192.168.50.250	TCP	2934	443 → 54267 [ACK] Seq=612070 Ack=2927 Win=69120 Len=2880 [TCP segment of a reassembled PDU]
11693	62.252680	192.168.50.250	18.66.248.63	TCP	54	54267 → 443 [ACK] Seq=2927 Ack=614950 Win=526848 Len=0
11694	62.252708	18.66.248.63	192.168.50.250	TLSv1.3	1494	Application Data, Application Data
11695	62.252722	192.168.50.250	18.66.248.63	TCP	54	54267 → 443 [ACK] Seq=2927 Ack=616390 Win=526848 Len=0
11696	62.253450	18.66.248.63	192.168.50.250	TCP	1494	443 → 54267 [ACK] Seq=616390 Ack=2927 Win=69120 Len=1440 [TCP segment of a reassembled PDU]
11697	62.253495	18.66.248.63	192.168.50.250	TCP	1494	443 → 54267 [ACK] Seq=617830 Ack=2927 Win=69120 Len=1440 [TCP segment of a reassembled PDU]
11698	62.253514	192.168.50.250	18.66.248.63	TCP	54	54267 → 443 [ACK] Seq=2927 Ack=619270 Win=526848 Len=0
11699	62.253531	18.66.248.63	192.168.50.250	TCP	1494	443 → 54267 [PSH, ACK] Seq=619270 Ack=2927 Win=69120 Len=1440 [TCP segment of a reassembled PDU]
11700	62.254247	18.66.248.63	192.168.50.250	TCP	4374	443 → 54267 [PSH, ACK] Seq=620710 Ack=2927 Win=69120 Len=4320 [TCP segment of a reassembled PDU]
11701	62.254294	192.168.50.250	18.66.248.63	TCP	54	54267 → 443 [ACK] Seq=2927 Ack=625030 Win=526848 Len=0
11702	62.255059	18.66.248.63	192.168.50.250	TCP	2934	443 → 54267 [ACK] Seq=625030 Ack=2927 Win=69120 Len=2880 [TCP segment of a reassembled PDU]
11703	62.255095	192.168.50.250	18.66.248.63	TCP	54	54267 → 443 [ACK] Seq=2927 Ack=627910 Win=526848 Len=0
11704	62.255117	18.66.248.63	192.168.50.250	TCP	1494	443 → 54267 [PSH, ACK] Seq=627910 Ack=2927 Win=69120 Len=1440 [TCP segment of a reassembled PDU]
11705	62.255984	18.66.248.63	192.168.50.250	TLSv1.3	4374	Application Data [TCP segment of a reassembled PDU]
11706	62.256018	192.168.50.250	18.66.248.63	TCP	54	54267 → 443 [ACK] Seq=2927 Ack=633670 Win=526848 Len=0
11707	62.256719	18.66.248.63	192.168.50.250	TLSv1.3	2934	Application Data [TCP segment of a reassembled PDU]
11708	62.256759	192.168.50.250	18.66.248.63	TCP	54	54267 → 443 [ACK] Seq=2927 Ack=636550 Win=526848 Len=0
11709	62.256828	18.66.248.63	192.168.50.250	TCP	1494	443 → 54267 [PSH, ACK] Seq=636550 Ack=2927 Win=69120 Len=1440 [TCP segment of a reassembled PDU]
11710	62.257491	18.66.248.63	192.168.50.250	TCP	4374	443 → 54267 [PSH, ACK] Seq=637990 Ack=2927 Win=69120 Len=4320 [TCP segment of a reassembled PDU]
11711	62.257536	192.168.50.250	18.66.248.63	TCP	54	54267 → 443 [ACK] Seq=2927 Ack=642310 Win=526848 Len=0
11712	62.258295	18.66.248.63	192.168.50.250	TCP	4374	443 → 54267 [PSH, ACK] Seq=642310 Ack=2927 Win=69120 Len=4320 [TCP segment of a reassembled PDU]
11713	62.258327	192.168.50.250	18.66.248.63	TCP	54	54267 → 443 [ACK] Seq=2927 Ack=646630 Win=526848 Len=0
11714	62.259109	18.66.248.63	192.168.50.250	TLSv1.3	4374	Application Data [TCP segment of a reassembled PDU]

See, e.g., Movie Player page for "Hatred" on Popcornflix website located at https://popcornflix.com/



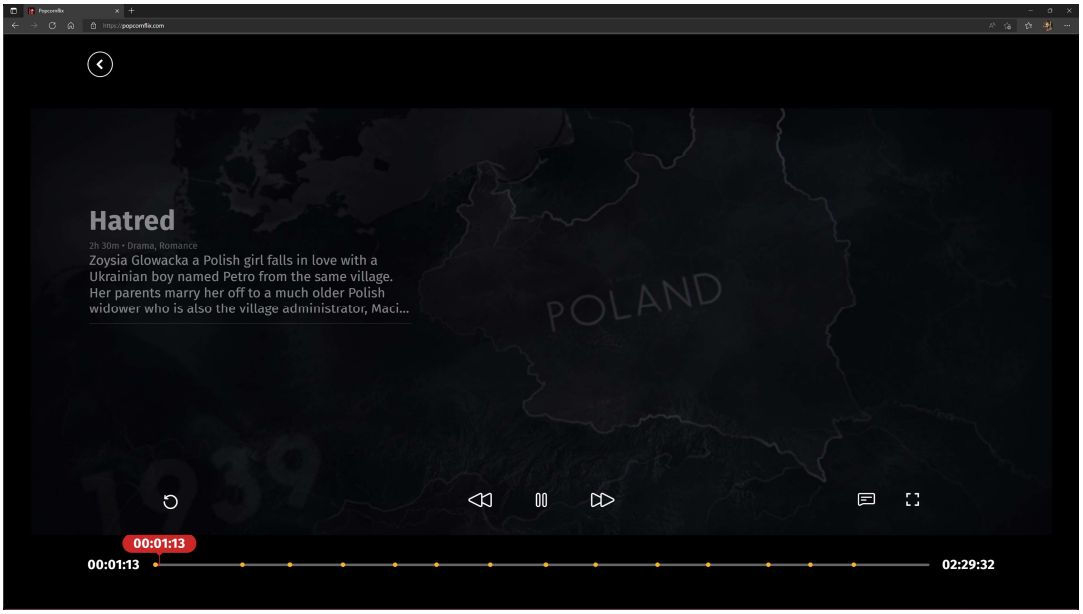






See, e.g., Movie Player page for "Beyond" on Popcornflix website located at https://popcornflix.com/

See, e.g., Movie Information page for "Hatred" on Popcornflix website located at https://popcornflix.com/



See, e.g., Movie Player page for "Hatred" on Popcornflix website located at https://popcornflix.com/

145. The PCF Application system comprises an owner of the node server being offered an

incentive as compensation for transmission of the specified content to the client. For example, the use of third-party servers by the PCF Application for the distribution of content to the user's device necessitates at least payment of monetary compensation for said hosting, including on a transactional basis or lump payment for set data limit basis, or as otherwise stated in the agreement between Crackle and any third-party whose server is used by the PCF Application.

146. Crackle has directly infringed, and continues to directly infringe, the claims of the '376 Patent, including at least those noted above, including by making and using the PCF Application system in violation of 35 U.S.C. § 271(a). Further, including at least to the extent Crackle provides and/or supplies software running on a user's computer, the direct infringement of users that occurs in connection with Crackle's applications and/or web services occurs under the direction or control of Crackle.

147. Crackle has had at least constructive notice of the '376 Patent since at least its issuance. Crackle will have been on actual notice of the '376 Patent since, at the latest, the service of this Complaint. Further, Crackle is being made aware of infringement of the '376 Patent through use of the PCF Application system at least via the infringement allegations set forth herein. Such direct infringement has been and remains clear, unmistakable, and inexcusable. On information and belief, Crackle knew, or should have known, of the clear, unmistakable, and inexcusable direct infringing conduct at least since receiving notice of the '376 Patent. Thus, on information and belief, Crackle has, at least since receiving notice of the '376 Patent, specifically intended to directly infringe.

148. QTI believes and contends that, at a minimum, Crackle's knowing and intentional post-suit continuance of its unjustified, clear, and inexcusable infringement of the '376 Patent since receiving notice of its infringement of the '376 Patent, is necessarily willful, wanton, malicious, in bad-faith, deliberate, conscious and wrongful, and it constitutes egregious conduct worthy of a

finding of willful infringement. Accordingly, at least since receiving notice of this suit, Crackle has willfully infringed the '376 Patent.

REMEDY AND DAMAGES

149. Plaintiff refers to and incorporates the allegations in the above paragraphs as if set forth fully herein.

150. Crackle's infringement of Plaintiff's rights under the Patent-in-Suit will continue to damage Plaintiff, causing irreparable harm for which there is no adequate remedy at law, unless enjoined by this Court, including under 35 U.S.C. § 283.

151. By way of its infringing activities, Crackle has caused, and continues to cause, Plaintiff to suffer damages, and Plaintiff is entitled to recover from Crackle the damages sustained by Plaintiff as a result of Crackle's wrongful acts in an amount subject to proof at trial, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court, including under 35 U.S.C. § 284.

152. Plaintiff also requests that this Court make a finding that this is an exceptional case entitling Plaintiff to recover its attorneys' fees and costs, including pursuant to 35 U.S.C. § 285.

DEMAND FOR JURY TRIAL

153. Pursuant to Rule 38 of the FEDERAL RULES OF CIVIL PROCEDURE, Plaintiff hereby respectfully requests a trial by jury of any issues so triable by right.

PRAYER FOR RELIEF

WHEREFORE, QTI hereby respectfully requests that this Court enter judgment in favor of QTI and against Crackle, and that the Court grant QTI the following relief:

A. That this Court enter Judgment including an adjudication that one or more claims of the Patent-in-Suit has been directly and/or indirectly infringed by Crackle, including pursuant to 35 U.S.C. § 281;

B. That this Court enter Judgment including a grant of a preliminary and permanent injunction, including pursuant to 35 U.S.C. § 283, enjoining Crackle and all persons, including its officers, directors, agents, servants, affiliates, employees, divisions, branches, subsidiaries, parents, and all others acting in active concert or participation therewith, from making, using, offering to sell, and/or selling in the United States and/or importing into the United States any apparatuses, methods, systems, and/or computer readable media that directly and/or indirectly infringe any claim of the Patent-in-Suit, and/or any apparatuses, methods, systems, and/or computer readable media that are not more than colorably different;

C. That this Court enter Judgment including an award to Plaintiff of damages, including pursuant to 35 U.S.C. § 284, adequate to compensate Plaintiff for Crackle's past infringement, together with pre-judgment and post-judgment interest, and any continuing and/or future infringement through the date such Judgment is entered, including all applicable, legally allowable, interest, costs, expenses, and an accounting of all infringing acts, including, but not limited to, those acts not presented at trial;

D. That this Court enter Judgment including a declaration that Crackle's post-notice infringement has been, and continues to be, willful, including that Crackle acted to infringe the Patent-in-Suit despite an objectively high likelihood that its actions constituted infringement of a valid patent and, accordingly, award enhanced damages, including treble damages, including pursuant to 35 U.S.C. §§ 284 & 285;

E. That this Court enter Judgment including a declaration that this case is an exceptional case and award Plaintiff reasonable attorneys' fees and costs, including in pursuant to 35 U.S.C. § 285; and

F. Any and all such other and further relief to which Plaintiff may be shown justly entitled

that this Court deems just and proper.

Dated: May 23, 2022

Respectfully submitted,

/s/ John C. Phillips, Jr.

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